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STATE OF SOUTH CAROLINA

REPORT

OF THE

STATE COMMISSION OF FORESTRY

FOR THE YEAR

JULY 1, 1978 TO JUNE 30, 1979



LEONARD A. KILIAN, JR., State Forester

COLUMBIA, S. C.

Printed Under the Direction of the
State Budget and Control Board

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*To Honorable Richard W. Riley, Governor and to the
General Assembly of South Carolina:*

Sirs:

Pursuant to Section 3 of Act of General Assembly creating the State Commission of Forestry, approved April 26, 1927, which provides that the Commission shall "inquire into and make annual report upon forest conditions in South Carolina, with reference to the preservation of forests, the effect of the distribution of forests upon the general welfare of the State, and other matters pertaining to the subject of forestry and tree growth including recommendations to the public generally as to reforestation," I have the honor to submit the report of the Commission for the period of July 1, 1978 to June 30 1979.

Respectfully submitted

STATE COMMISSION OF FORESTRY

A. Brandon Taylor, Jr., Chairman

ADMINISTRATION

Leonard A. Eilber, Jr., State Forester and Secretary to the Commission

Virginia S. Holmes, Executive Assistant to State Forester

Walter T. Ahern, Staff Director

John M. Miller, Division Director, Forest Engineering and Logistics

Charles R. Nichols, Division Director, Field Operations

Charles F. Burden, Division Director, Administration

FOREWORD

Interest in the reforestation and protection of forest land in South Carolina began as early as 1787 when a law was passed which provided for the punishment of any person who wilfully, maliciously or negligently caused fire to do damage to the property of another. Between 1787 and 1912 some eleven bills were passed concerned with forestry, largely dealing with the protection of the forest from fire. Increasing activities in lumber and naval stores directed attention of thoughtful individuals to the fast disappearing timber supply. The growing interest in the future of South Carolina's forest resources culminated in the Act of the General Assembly of South Carolina (1976 Code of Laws, Volume 16, Title 48, Chapter 23), April 26, 1927, creating the State Commission of Forestry. The first appropriation of \$4,000 was made by the General Assembly in 1928.

The first organized forest fire control efforts were initiated in 1928 when groups of landowners in cooperation with the S. C. State Commission of Forestry formed five forest fire protection organizations for the control of woods fires on some 195,000 acres of woodland. These Forest Protective Associations, as they were known, grew in number and size until 1944 when 24 counties had organized fire protection organizations.

The year 1945 was a banner year for forest fire protection, for it was then that the General Assembly passed the South Carolina Forest Fire Protection Act (1976 Code of Laws, Volume 16, Title 48, Chapter 33) which extended organized forest fire protection to every county in South Carolina — the first of any of the southeastern states to take such a step.

Paralleling the growth of forest fire protection, reforestation of cut-over and idle land also came in for ever increasing emphasis. Just two years after the Act creating the State Commission of Forestry, the General Assembly authorized the S. C. State Commission of Forestry to establish a nursery and grow forest tree seedlings. This was done on a 5-½-acre tract near Camden where 731,400 seedlings were raised the first year. This program has grown to four state nurseries and one industry-operated nursery which now produce some 50 million forest tree seedlings annually, both pine and hardwood, for planting throughout South Carolina. In 1961 attention was given to improving the quality of seedlings available for planting in South Carolina by establishing seed orchards of superior trees through a cooperative Tree Improvement Program involving both state and industrial interests.

Direct assistance to farmers and other landowners in managing their forest land began in the winter of 1930-31 as a demonstration in Fairfield County of proper thinning, measurement of board foot content of standing timber and use of equipment in suppression of forest fires. Under a

cooperative agreement with the county agricultural agents, such demonstrations were held just two years later in 33 counties. Such direct assistance has grown through the years and has expanded to include individual forest land examinations, 2,474 of which were made by Commission foresters this fiscal year. In addition to these examinations, Forestry Commission foresters marked timber for sale for 391 land-owners.

From the very beginning of activity by the State Commission of Forestry, education has been a prime function in the fields of fire protection, reforestation and forest management. In the fall of 1928, at the South Carolina State Fair, an exhibit program was initiated that has been carried on continuously since that time. Each year the Forestry Commission places exhibits promoting a forest conservation concept in the State Fair and in every county fair that provides the space. The year 1929 saw expansion of the Forestry Commission's educational efforts when, in cooperation with the American Forestry Association, one, then later three, motion picture trucks showed movies and distributed literature to schools, clubs and other groups. In 1930 it was reported that 320 shows and lectures reached a total of 54,000 men, women and children. An additional boost was given the school program when in 1931, in cooperation with the office of the Supervisor of Vocational Agricultural Education, forestry was added as a study in Vocational Agriculture classes throughout the state.

At present, heavy emphasis continues through all media available — schools, clubs, civic groups, radio and television and the press in telling the forest conservation story and the needs of the future. It is expected that the demand for wood and wood fiber will double by the year 2000. Multiplied many times also will be demands for other uses of the forest — recreation, wildlife management, water conservation and a myriad of other needs in the area of aesthetics. The South Carolina State Commission of Forestry has been concerned through the years with all aspects of forest conservation and will continue to promote by every means available the wise use of South Carolina's forest resources.

ADMINISTRATION

Summary

Losses of personnel decreased during the last fiscal year. A total of 51 employees resigned or retired during the year, 7.9% of the total workforce. The Commission budgeted and expended on all phases of the forestry program \$10,029,505. (See Financial Statement for detailed explanation of funds available and expenditures made.)

PERSONNEL ACCIDENT AND INJURY

During the fiscal year, 54 work related accidents were reported to the State Workmen's Compensation fund. Most of these accidents resulted in minor injuries requiring only first aid treatment and involving no time lost from work. However, there were 5 accidents requiring hospitalization ranging from 1 to 9 days.

Personnel safety was emphasized throughout the year and all accident cases were reviewed to determine frequency of similar accidents. This emphasis on safety resulted in a 15% decrease in injuries from last year.

AUTOMOTIVE ACCIDENTS

During the fiscal year Commission personnel driving Commission-owned motor vehicles on Commission business were involved in 6 accidents, an increase of 2 from last year. Of the 6 accidents which occurred, none were classified as being preventable by the operator. This outstanding safe driving record is a result of continued emphasis being placed on the careful operation of motor vehicles on Commission business.

PERSONNEL

Personnel policies and procedures were reviewed and revised during the year. New or revised procedures implemented included grievance, discipline, performance appraisal, reduction in force and exit interview procedures. Employee performance appraisal training sessions were also conducted for all supervisory personnel. Internally, personnel forms were reviewed to streamline processing of necessary paperwork, including installation of a new leave recording system.

Continued emphasis was placed on the Forestry Commission's Affirmative Action program. On April 26, 1979, the Forestry Commission Chairman, State Forester and Personnel Director appeared at a hearing before the South Carolina Human Affairs Commission which was called to investigate our equal employment opportunity practices.

Because of our emphasis on Affirmative Action and our excellent working relationship with staff members of the Human Affairs Commission, the hearing was a very positive experience. The Forestry Commission was commended on its commitment and excellent progress, yet reminded of its responsibility to continue to progress in this ongoing program.

ACCOUNTING

Accounting policies and procedures have also been reviewed and revised during the year. An update in procedures for accounts payable decreased the amount of time required to pay invoices, resulting in substantial improvement in this function.

The entire accounting procedure was reviewed and numerous changes were made in anticipation of the future development of data processing capabilities to facilitate more timely and efficient operations.

FINANCIAL STATEMENT S. C. STATE COMMISSION OF FORESTRY July 1, 1978 - June 30, 1979

RECEIPTS

Operating Revenue From 1977-78	\$ 100,697.68
Capt. Imp's. — Bond Proceeds From 1977-78	336.09
Sand Hills Forest-Federal From 1977-78	314,792.44
Supplemental Appropriation	323,823.00
Clark-McNary Law, Section 2	788,600.00
Cooperative Forest Management	117,340.00
Cooperative Forest Management — Sawmill Improvements	40,000.00
Cooperative Forest Management — Improved Harvesting	21,000.00
Cooperative Forest Management — Urban & Community Forestry ...	26,350.00
Cooperative Forest Management — Section 4	11,250.00
Improved Drying Programs	18,750.00
Water Quality	30,982.00
Watersheds, PL — 566	54,122.95
R. C. & D. Technical Assistance	14,829.22
Insect & Disease Program — Detection & Evaluation	28,199.00
General Forestry Assistance — Improved Harvesting	33,168.87
Forestry Incentive Program	148,358.00
Agriculture Conservation Program	21,900.00
Sand Hills Forest — Federal	451,454.30
Rural Fire Departments — Federal Reimbursement	50,200.00
Young Adult Conservation Corps	193,290.00
State Appropriation	6,704,740.33
State Appropriation — Compensation Plan Increments	206,981.00
State Appropriation — Employer Contributions	846,093.00
Timber Firms	1,211.25
Firebreak Plowing	15,776.50

Prescribed Burning	1,565.00
Equipment Rental	13,345.89
State Forest — Manchester	42,407.13
Miscellaneous	30,157.93
General Revenue — Timber Marking	21,965.82
General Revenue — Nurseries	397,502.86
General Revenue — State Forests	126,985.16
General Revenue — Hunting & Fishing — Manchester	5,806.00
General Revenue — Miscellaneous	134.10
Total Receipts — Forestry	\$11,204,115.52
Less Receipts to General Revenue Account	-552,393.94
Less Appropriation Lapsed to General Fund	- 576.54
Total Receipts Available for Expenditure	\$10,651,145.04
Less Expenditures	-10,029,505.38
Balance — Forestry Commission	\$ 621,639.66

FOREST ENGINEERING AND LOGISTICS

RADIO

Progress of the overall communications program of the Forestry Commission continues to be excellent. Eight radio technicians handle the installation, maintenance and research activities of the Commission's radio communications program.

Columbia Radio Shop:

The Central Radio Communications Maintenance and Repair Shop is located at 241 Catawba Avenue in Columbia. All communications activities including radio installations, maintenance, and repairs of communications equipment by the radio technicians assigned to outlying districts, are administered from this communications headquarters.

Inventory of Radio Improvements and Equipment

- 8 Remote Control Base Units, 330 watts
- 1 Remote Control Base Unit, 375 watts
- 1 Mobile Relay Base Unit, 120 watts
- 27 Local Control Base Units (Tube Type)
- 121 Local Control Base Units (Solid State)
- 3 Mobile Units (Transistorized), 80 watts (For mobile relay)
- 4 Mobile Units (Tube Type)
- 108 Mobile Units (Transistorized), 40 to 110 watts
- 478 Mobile Units (Transistorized), 15 to 30 watts
- 87 Portable Units, 1½, 3 and 5 watts
- 217 Auxiliary receivers
- 8 Radio Towers

EQUIPMENT

Fourteen (14) new medium suppression tractors were purchased as replacements for worn out units and fourteen (14) medium transports were replaced with new trucks.

The Forest Engineering and Logistics Division is continuing with its program of replacing $\frac{1}{2}$ ton ranger's pickups with $\frac{3}{4}$ ton, 4 wheel drive vehicles capable of handling 260 gal. of water. This program greatly increases the capability of the ranger in both access to fires and water carrying capacity. Twelve of these units were assigned during fiscal year 1978-79.

Equipment Maintenance Shop:

All regular and specialized fire suppression equipment is modified and processed for field use at the Commission's Central Repair Shop. This year the shop manufactured 12 265-gal. water tanks. These tanks along with all accessory items were used to build the 12, 4 wheel drive, $\frac{3}{4}$ ton pickups assigned to County Rangers.

Central Shop personnel made numerous repairs to Forestry Commission vehicles and equipment, and manufactured special fire control items. Some of the work done this year included: built 14 medium suppression unit transport bodies, outfitted 14 medium tractors for field use, including modification of canopies, plows, etc.

In addition, 120 minor repairs and 6 major repairs were made to equipment.

Many items are modified or built outright at the Central Repair Shop including tractor bumpers, truck ramps, tractor drawbars, plow tongues, plows, and tool boxes. Vehicles are painted and decals are installed at the Central Shop.

Inventory of Basic Fire Tools and Equipment

June 30, 1979

- 1,256 Bank Pack Pumps
- 3,921 Fire Rakes
- 1,414 Fire Swatters
- 662 Backfire Torches
- 6 Heavy Suppression Tractor-Plow units w/Transports
- 223 Medium Tractor-Plow Units w/Transports
- 4 Heavy Lowboy Trailers
- 46 Ranger Pickup Trucks
- 1 $\frac{1}{2}$ -ton Jeep
- 11 Mechanics and Radio Technicians Station Wagons
- 1 2-ton Jeep
- 21 $\frac{1}{2}$ -ton Pickup Trucks (Mechanics)

- 18 Ground Tankers
- 2 Forest Fire Simulators
- 3 Fire Headquarters Trucks

Tankers:

The number of ground tankers in the field totals 40. Tankers range in capacity from 260 gallons to 5,000 gallons and are stationed in various parts of the state. Listed below are location, tanker size and year put into service.

GROUND TANKERS

<i>Location</i>	<i>Capacity (Gallons)</i>	<i>Year in Service</i>
Richland	300 Ford 350	8/69
Orangeburg	2000 Trailer	3/70
Camden	2000 Trailer	1/70
Florence	1200 6x6	3/70
Florence	1200 6x6	6/70
Central Shop	5000 Trailer	5/70
Richland County	400 Ford 350	5/72
Marlboro County	700 (4WD, International)	6/73
Central Shop	700 (4WD, International)	6/73
Lexington County	260 (4WD, Chevrolet)	6/73
Camden	260 (4WD, Chevrolet)	6/73
Greenwood County	260 (4WD, Chevrolet)	6/73
Berkeley County	260 (4WD, Chevrolet)	3/76
Florence County	260 (4WD, Chevrolet)	3/76
Jasper County	260 (4WD, Chevrolet)	3/76
Clarendon County	260 (4WD, Chevrolet)	3/76
Chester	260 (4WD, Chevrolet)	5/77
Charleston	260 (4WD, Chevrolet)	5/77
Hampton	260 (4WD, Chevrolet)	5/77
Marion	260 (4WD, Chevrolet)	5/77
Oconee	260 (4WD, Chevrolet)	5/77
Sumter	260 (4WD, Chevrolet)	5/77
Allendale	260 (4WD, Chevrolet)	5/77
Georgetown	260 (4WD, Chevrolet)	5/77
Pickens	260 (4WD, Chevrolet)	5/77
Marlboro	260 (4WD, Chevrolet)	5/77
Horry	260 (4WD, Chevrolet)	5/77
Orangeburg	260 (4WD, Chevrolet)	5/77
Kershaw	260 (4WD, Chevrolet)	6/78
Lancaster	260 (4WD, Chevrolet)	6/78

<i>Location</i>	<i>Capacity (Gallons)</i>	<i>Year in Service</i>
Richland	260 (4WD, Chevrolet)	6/78
Williamsburg	260 (4WD, Chevrolet)	6/78
Abbeville	260 (4WD, Chevrolet)	6/78
Laurens	260 (4WD, Chevrolet)	6/78
Saluda	260 (4WD, Chevrolet)	6/78
Barnwell	260 (4WD, Chevrolet)	6/78
Calhoun	260 (4WD, Chevrolet)	6/78
Union	260 (4WD, Chevrolet)	6/78
Beaufort	260 (4WD, Chevrolet)	6/78
Dorchester	260 (4WD, Chevrolet)	6/78

FIELD OPERATIONS

FOREST MANAGEMENT

The major emphasis of the Commission's forest management program is assisting small private owners in the management of their woodland properties. To date more than half the total woodland area of the state has been examined by foresters and recommendations made to increase their contributions. More than 33,026 landowners have been assisted with forest management plans.

The 1978 Forest Survey shows that 65 percent of the total land in South Carolina is classified as woodland. This is an increase of 92,000 acres since 1968. The ownership pattern changed slightly as one percent of the land in farmer and miscellaneous private shifted to forest industry. Farmer ownership continued to shift to miscellaneous private. Farmers dropped from 54 percent of the small industrial private ownership in 1968 to 49% in 1978. Farmers and miscellaneous private owners hold more than 73 percent of the forestland, forest industry approximately 18 percent and public ownership 9 percent.

Foresters of the State Commission of Forestry are available to give forest management assistance to any landowner in the state upon request. This assistance consists of an examination of the woodland area, after which the forester prepares and furnishes to the owner a written plan for managing his forest property. This includes recommendations on site preparation, tree planting, protecting the woodland from wildfire, insects, and diseases, improving stands of trees, intermediate thinnings, and harvest cuttings as needed. Consideration is given to the improvement of soil, water, wildlife, recreation, aesthetics, and other environmental and ecological aspects along with timber production.

The working relationship established between the S. C. State Commission of Forestry and the ten Councils of Government was continued throughout the year. All Commission foresters work with Regional Planning Councils wherever needed.

During 1978-79 the Commission had a total of 40 man-years devoted to assisting small private landowners with forest management on their lands, including the small watershed activities. These men prepared 2,623 forest management plans. Timber on 375 tracts covering 6,696 acres was marked preparing 15,321,044 board feet of sawtimber and 25,220 cords of pulpwood for the market.

Where the forest management needs of the owner indicate it, Commission foresters encouraged the landowner to employ a private consulting forester. Commission foresters also work closely with industry foresters who give direct assistance to landowners.

The demand for sawtimber and other forest products increased significantly during the year resulting in higher prices paid for sawtimber stumpage. Prices paid for pulpwood stumpage were slightly higher than last year.

Non-technical qualified rangers continued to handle some non-fire control jobs when this would not interfere with their fire control activities. In Edgefield County a technical forester-ranger handled both the fire control and management activities.

The State Commission of Forestry operates four state forests. Combined areas of these state forests represent about one percent of total forest area of the state. Experimental and demonstration work and all forms of multiple use forest management activities were continued.

Four state tree nurseries were in operation during the 1978-79 year. The number of acres planted to trees in South Carolina decreased slightly over the previous year. The nurseries are expected to increase tree production to provide for the expanded needs of forest industry and the Forestry Incentives Program.

The greatest problem facing South Carolina landowners is reforestation of some 1.8 million acres of understocked private non-industrial woodland. The Forestry Commission will concentrate its efforts in this direction. The forest management program expansion will be aimed at assisting these small private landowners in getting more of this work accomplished. South Carolina cannot afford the loss from allowing these lands to remain unproductive. If we set 1.8 million acres as a goal and accomplish this in the next 20 years, the annual return to landowners would approximate \$27 million and the annual total business increase to the state could reach more than \$405 million. In the process, with proper consideration, environmental benefits can be increased in proportion to these economic benefits.

A Forestry Incentives Program providing landowners cost-sharing assistance for reforesting cutover woodland or other forest improvement practices was first funded by Congress in 1974. This program was continued this year and is expected to stimulate forest planting on non-industry private landowner woodlands at about the present rate. More details on this effort appear under the section on the Forestry Incentives Program.

Woodland Management Assistance

The 40 man-years of forest management time of foresters were directed toward assisting private landowners with their woodland management problems. Clemson University Extension foresters assisted in this program, primarily with promotional demonstration effort.

Any landowner in the state can receive assistance. A forester, with the landowner or his agent, will look over the woodland, give on-the-ground advice and prepare a report covering recommendations. This includes any cutting, fire protection, insect and disease control, timber stand improvement, reforestation, wildlife and recreational measures that are needed. No charge is made for this woodland examination.

When cutting of timber is recommended, a forester of the State Commission of Forestry will, at the request of the landowner, mark the timber to be cut, provide the landowner with an estimate of the volume marked for cutting, and furnish a list of prospective buyers, a suggested form for advertisement, and a sample timber sale agreement. The charge for this service is \$1.00 per thousand board feet of sawtimber and 35 cents per cord of pulpwood marked. All other services are provided free of charge.

In addition to the above, recommendations are given on prescribed burning in pine types. Prescribed burning is a technical measure which involves the application of fire to woodlands under conditions of proper weather, soil moisture, season, time of day, and forest type. Fire as a tool can be beneficial in the control of weed trees, seedbed preparation, control of "brown spot" disease of longleaf pine and reducing hazardous fuels. Recommendations for the use of prescribed fire are made only after very careful analysis with the landowner of the forest conditions to be sure that benefits will be greater than probable damages.

During the year Commission foresters made 2,623 examinations on 200,192 acres of forestland. They selectively marked 15,321,044 board feet of sawtimber and 25,220 cords of pulpwood for 375 landowners of 6,696 acres of forestland.

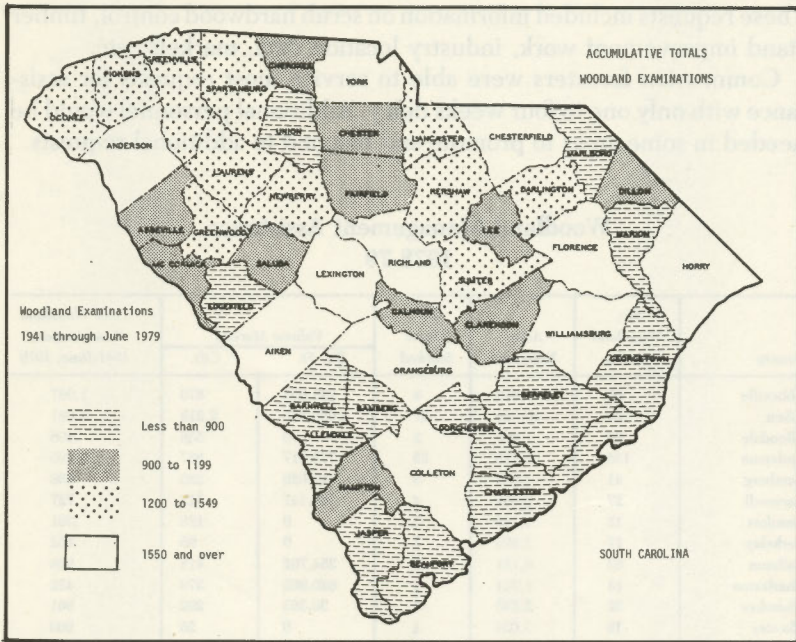
In addition to woodland examination and marking services, a large number of requests for general information and advice were answered by the Columbia, district, and project office technical forestry staffs.

These requests included information on scrub hardwood control, timber stand improvement work, industry location data, markets, etc.

Commission foresters were able to service most requests for assistance with only one to four weeks delay. Additional personnel would be needed in some areas to promote and respond to additional requests.

Woodland Management Assistance 1978-79

County	No. Woodland Exams	Acres Examined	No. Tracts Marked	Volume Marked		Total Woodland Examinations 1941-June, 1979
				Bd. Ft.	Cds.	
Abbeville	60	4,413	8	233,605	870	1,067
Aiken	131	10,949	27	2,055,555	2,218	2,081
Allendale	22	1,428	2	0	536	496
Anderson	135	9,126	23	775,817	887	2,195
Bamberg	41	4,085	5	622,629	265	886
Barnwell	27	2,662	4	160,147	513	727
Beaufort	12	1,145	1	0	128	391
Berkeley	17	1,804	1	0	95	462
Calhoun	83	6,181	8	354,702	418	998
Charleston	14	1,324	2	620,902	379	452
Cherokee	32	2,285	7	30,363	292	961
Chester	19	3,034	1	0	28	960
Chesterfield	83	4,918	3	230,687	156	1,756
Clarendon	53	2,901	2	50,548	23	969
Colleton	96	8,055	16	1,477,750	380	1,949
Darlington	57	2,980	2	205,570	102	1,503
Dillon	32	3,131	1	94,000	0	1,121
Dorchester	34	3,210	3	335,499	0	634
Edgefield	30	2,875	2	183,981	96	609
Fairfield	46	5,199	8	883,039	803	1,074
Florence	88	7,354	15	423,147	244	2,064
Georgetown	17	1,018	1	37,439	0	368
Greenville	65	4,639	21	924,937	1,486	1,267
Greenwood	92	8,173	4	336,365	643	1,319
Hampton	59	4,700	2	164,693	196	1,120
Horry	36	2,387	6	64,426	62	1,815
Jasper	24	1,616	1	116,415	0	458
Kershaw	66	3,911	0	0	0	1,435
Lancaster	53	2,736	2	9,393	3	1,367
Laurens	52	5,716	2	0	94	1,357
Lee	20	1,794	0	0	0	905
Lexington	118	6,848	30	620,385	1,956	1,695
Marion	34	3,508	1	5,824	4	510
Marlboro	26	2,117	1	27,000	5	829
McCormick	35	2,470	8	147,089	717	1,040
Newberry	74	7,300	5	804,414	738	1,426
Oconee	86	5,926	48	679,042	1,666	1,546
Orangeburg	157	8,868	20	1,526,942	1,893	2,325
Pickens	70	3,751	20	361,449	2,863	1,418
Richland	79	6,778	14	158,408	601	1,801
Saluda	53	5,542	0	0	0	1,070
Spartanburg	60	2,618	23	218,724	2,090	1,362
Sumter	36	3,140	1	23,059	4	1,418
Union	37	3,680	0	0	0	577
Williamsburg	85	6,630	7	0	398	1,631
York	77	5,267	17	357,099	1,368	1,815
TOTALS	2,623	200,192	375	15,321,044	25,220	55,229



Consulting Forester Activity

Commission foresters continued to follow the practice of referring all appropriate cases to consulting and industry foresters wherever possible. Records show 433 cases were referred to consulting foresters and 440 cases were referred to industry foresters. Many additional requests for assistance were referred to consulting foresters and industry foresters where no field work was done by Commission personnel.

Watershed Projects

A program to help control water runoff on the small watersheds and to protect bottomlands along the smaller streams from overflow was initiated some years ago through Public Law 566. The State Commission of Forestry has the responsibility of providing needed forestry assistance under agreement with the U. S. Forest Service. There were 15 of these small watershed projects active under Public Law 566 in the state.

There are 91 separate watersheds in the state on which work has been completed or is still under operation or in planning stages.

A summary of accomplishments on the active watershed projects is given in the accompanying table:

Watershed projects which have forestry work completed are: Twelve Mile Creek Pilot Watershed, Pickens County; Coneross Creek, Oconee County; Wateree Creek, Fairfield County; Beaverdam Creek, Edgefield County; Brushy Creek, Anderson County; Hills Creek, Chesterfield County; Huff Creek, Greenville County; Big Creek, Anderson County; Maple Swamp, Marlboro County; Lynches Lake-Camp Branch, Florence County; Fishing Creek, York County; Duncan Creek, Laurens County; Wilson Creek, Anderson and Abbeville Counties; Wilson Creek Greenwood County; Carters Branch-Muddy Creek, Marlboro County; Horse Range Swamp, Orangeburg County; Willow Swamp, Colleton and Bamberg Counties; Thicketty Creek, Cherokee County; Georges Creek, Pickens County; Hollow Creek, Lexington County; and North Tyger, Spartanburg County.

Forest Products Utilization and Marketing

Sawtimber and Pulpwood Stumpage Prices for South Carolina

*Five-Year Period**

<i>Fiscal Year</i>	<i>Weighted Average stumpage price per thousand board feet Scribner Tree Scale</i>	<i>Weighted Average stumpage price per Standard Cord</i>
1974-75	\$ 57.50	\$ 8.50
1975-76	79.98	9.38
1976-77	91.64	10.83
1977-78	98.00	10.66
1978-79	127.13	11.46

* Sales of timber marked by Commission foresters on private property.

The average price of pine and hardwood sawtimber increased significantly again during the past year. This was a result of an upswing in the general economy. Pulpwood prices also increased due to good demand.

The S. C. PRIMARY WOOD USING INDUSTRIES BUYERS & SELLERS GUIDE was revised during the year. This is a joint publication of the Commission of Forestry and Clemson University Extension Service.

During the year information was gathered from wood using industries for a commodity drain report for 1978. This report is being compiled and will be distributed to all wood using industries in the state.

Several existing mills made improvement in their operations and site clearing began for a large sawmill in the Piedmont. This shows continued industry confidence in South Carolina as a permanent source of wood.

The Commission continued its program of providing direct assistance to the wood using industry. This included time studies, systems analysis, cost control, marketing and training programs, etc.

The objective of the Improved Harvesting Program is to "stretch" the state's timber supply through better utilization in the woods and at the mill's merchandiser deck. Of the three felling and bucking studies completed, the results showed that the loggers could increase their daily production from 5 to 7 percent by: (1) reducing stump heights in the woods; (2) preventing mis-cut log lengths and; (3) improving bucking logs with sweep and crook.

The Sawmill Improvement Program was also continued this year. Rapidly increasing lumber prices, environmental concern and pollution control are all making sawmillers more aware of the need to minimize so called "waste" in the sawmill and to maximize yield from their log input.

Also initiated this year was a two year study to determine the tonage of wood residue left in the woods after a final harvest cut. Preliminary results of this study show that the wood using industries are doing a good job of harvesting all merchantable wood. This study shows that from 3 to 54 tons per acre of non-merchantable wood is being left after the site is harvested. With cost of fossil fuels increasing, there is an opportunity for the utilization of this low grade wood fiber if proven economically feasible.

Other assistance consisted of providing detailed resource information to those interested in locating wood using industries in the state, or in enlarging existing operations. This type of information was provided the State Development Board for prospective wood using industries in several areas of the state especially in Aiken, Marlboro, Richland and Union Counties.

In addition, training was given to Commission field foresters in forest utilization and marketing procedures and wood protection in use. Also

the Commission handled over 234 miscellaneous utilization, marketing and energy requests during the fiscal year.

Resource Conservation and Development Projects

The Resource Conservation and Development (RC&D) program is initiated and sponsored by local citizens. Federal, state and local government with industry and others work together on proposals these citizens consider necessary to develop a better way of life for all citizens in the area. The RC&D objective is to increase economic opportunities through the orderly development, conservation and improvement of all resources including land, water and woodlands.

Lowcountry Resource Conservation and Development Project

This is a local program in which state, federal, and local governments work together to improve the economy of seven lowcountry counties. The counties are Beaufort, Berkeley, Charleston, Colleton, Dorchester, Hampton, and Jasper. This project began during the 1967-68 fiscal year.

One Commission forester is assigned to work full time in this project area. He concentrates on prescribed burning, utilization and marketing, and all other phases of the forest management program. The landowner assistance accomplished by this forester is included in the forest management assistance figures located elsewhere in this report.

During the past year, computer analysis of the wetland drainage study continued. The data, collected by the RC&D Forester, will be used to examine and measure pine growth on wet pine lands and to correlate soils on plots adjacent to canals to determine the financial feasibility and practicality of surface water control. A report will be published as soon as the data analysis is completed.

Assistance was also provided on a wood residue study which was begun during the past year. The study will determine the amounts of wood residue left on specific sites after harvesting, and will be used to show where improved utilization of wood fiber can be achieved on certain sites.

Other projects which involved the RC&D Forester included assisting with planning a wood-energy meeting to promote the use of wood as fuel; planning a federal forest taxation school for woodland owners and managers; assisting with the planning and conducting of a woodland management tour for woodland owners; and conducting a woodland clinic for vocational agriculture students.

Crossroads of History Resource Conservation and Development Project

This is the ninth year of operation for the six-county area comprised of Cherokee, York, Union, Chester, Lancaster and Fairfield Counties.

This is a program in which state, federal and county agencies work together to improve the economy of the area.

One Commission forester was assigned to work full-time in this project area. His primary concern was the development and initiation of projects and activities which complement the forest management program and other Commission programs in the RC&D area. Major emphasis was placed in four areas:

- Developed guidelines and established the "Best Management Practices" for silvicultural activities. These received conditional approval by E.P.A. and meet the requirements of Public Law 92-500, Section 208, of the Clean Water Act. Continued data analysis of the study to determine characteristics of private non-industrial woodland owners who are interested and invest in forest management. Knowledge of these characteristics will sharpen and make information and education activities more effective.

- Investigate wood-using industries which could locate in the area and use low quality stumpage; particularly an industry whose product is an energy source or supplement.

- Increased participation of private woodland owners in the American Tree Farm Program. Eighty Tree Farms were inspected in the RC&D area.

His emphasis in other areas included: coordination of forest activities with industrial and rural development; forest related beautification, education and recreational activities; environmental education related to good forest management through teacher workshops, school outdoor classrooms, environmental laboratories and trails, assistance to rural fire departments and other phases of the forest management program. The landowner information and education accomplishments of this forester are reported elsewhere.

Forest Survey

The fifth Forest Survey for South Carolina has been completed except for final State report. This report will be published in the fall of 1979. This survey shows that 65% of the total land in South Carolina is classified as woodland. This is an increase of 92,000 acres since 1968. The ownership pattern changed slightly as one percent of the land in farm and miscellaneous private shifted to forest industry. Farm ownership continued to shift to miscellaneous private. Farmers dropped from 54 percent of the small industrial private ownership in 1968 to 49 percent in 1978. Farmers and miscellaneous private owners hold more than 73 percent of the forestland; forest industry approximately 18 percent, and public ownership 9 percent.

The net volume of sawtimber increased by 37 percent since the last survey. This increase was equally distributed between softwood and hardwood.

The statewide figures show that the net annual growth is almost double net annual timber removal.

The statewide net annual growth of growing stock averages over 77 cubic feet per acre of forestland and represents a 31 percent increase over the last survey.

The Forest Survey was conducted by the Southeastern Forest Experiment Station of Asheville, North Carolina, a research unit of U. S. Forest Service.

Urban Forestry

The first urban forestry project in South Carolina was established in Columbia in 1973 followed by a project in the Greenville/Spartanburg area in 1974. An urban wood utilization project was started in Charleston in 1977. Last year an urban project was started in Florence. During the 1977-78 fiscal year CFM foresters in Anderson, Conway/Myrtle Beach, and York devoted 25% of their time to determine if an urban forestry program was needed in these areas. Four projects were fully funded for the year. Although the Conway/Myrtle Beach was not funded, response from the 78 needs survey resulted in a considerable activity by the project forester.

Urban foresters work with private business, planners, governmental agencies and the general public for the care, protection and wise use of our urban forests.

The following are urban forestry accomplishments for fiscal year 1978-79:

	Columbia	Greenville/ Spartanburg	Charleston	Florence	Conway
Individual Assists	612	755	241	100	341
Professional Assists	28	98	13	16	48
Tree Expert Referrals	82	147	68	47	11
Environmental Surveys	0	3	3	3	0
Woodland Examinations	2	0	10	5	0
Marking and/or	0 MBF	605 MBF	1,537 MBF	100 MBF	0 MBF
Marketing Assists	180 Cds.	1,285 Cds.	1,689 Cds.	74 Cds.	56 Cds.
News Release/Radio	8	18	13	14	10
Television					
Garden/Civic Club Programs & Demonstrations	22	79	28	6	3

Each urban forester assisted with special projects.

The Columbia urban forester assisted groups with planning as he worked with Rosewood Community Council, Columbia Tree Ordinance

Committee, Harbison Community Association and Lexington County Planning Development Board (HUD Project in Harbison Community) and presented a paper at the National Urban Forestry Conference in Washington, D.C.

The Greenville/Spartanburg urban forester continued to study Christmas tree growing and working with growers to study plantings on landfill sites. He assisted Civil Defense with timber loss survey following a tornado in Greenville County on March 23, 1979.

The Charleston urban forester assisted cities of Charleston and Mt. Pleasant in developing tree ordinances, aided in restoration of the Angel Oak, participated in a Plant Problem Clinic, taught in the Institute of Environmental Studies at the Citadel, and presented a paper at the National Urban Forestry Conference in Washington, D. C.

The Florence urban forester worked with the City Parks and Recreation Commission and County Planning Commission and promoted the Christmas tree industry in Florence.

The Conway Project Forester participated in these projects: two public plant problem clinics (3,300 attended); land use plan and vegetative screen for North Myrtle Beach and Conway; surveys of tree and plant needs in Conway and North Myrtle Beach; Horry County landfill ecological and landscaping needs; establishment of experimental natural planting on Highway 501 median; and outdoor classroom development with school district.

State Forests

There are four state forests operated by the Forestry Commission:

Cassatt State Forest	462 acres
Harbison State Forest	2,188 acres
Manchester State Forest	28,830 acres
Sand Hills State Forest	92,000 acres
TOTAL	123,480 acres

Prior to acquisition by the state most of the land included in the state forests had been heavily cut over and generally misused. The primary efforts since acquisition by the state has been directed to building up the growing stock in existing forest stands, planting submarginal old fields to desirable species of forest trees, and developing an adequate multiple use and wildlife management program.

It is the objective of the S. C. State Commission of Forestry to practice on forest lands under its jurisdiction and to promote on other ownerships where applicable the principles of high quality multiple use and sustained yield management, and to promote practices to protect and enhance environmental quality in the management of all forest ownerships.

Multiple use management considers and includes provision for, as appropriate, timber production, grazing, fish and wildlife, air, water, soil, recreation, aesthetics, scenic beauty, environmental quality, wilderness and natural areas, scientific research and ecological considerations.

Multiple use involves the management of all the forest's renewable resources so that they are utilized in the combination that will best meet the needs of the environment and the people of South Carolina.

In most instances forest land is not fully serving the people if it is used exclusively for a purpose which could also be achieved in combination with several other uses. However, multiple use does not imply that all uses must coexist at the same time and place on a given acre of forest land. Because of specific circumstances on a given acre one use might be dominant while other uses are subordinate.

The practice of multiple use therefore usually requires compromise. The Commission believes that such compromise and limitations are acceptable and desirable when there is greater total benefit.

On all state forest lands these concepts of multiple use are adhered to. Silvicultural practices are carried out on small sized blocks interspersed throughout a compartment. This even-age management produces a compartment of the forest representing all age groups of timber, open, newly cleared, areas favored by doves, quail and deer, young dense stands for cover and concealment, and older more open stands for quail and deer hunting also on which den trees for squirrels are reserved. Game census reports from these forests indicate this method of management produces close to optimum numbers of game species and timber production, with cost of management not adversely affected.

Demonstrations and Meetings

Several large group meetings were held at the state forests to show some of the results of research and experimental work. In addition a large number of individuals and small groups visited the areas to observe methods and results of scrub oak reclamation to productive forest land.

Payment to Counties

Twenty-five percent of the gross receipts of all state forest operations is paid to the counties in lieu of taxes. This year's payment to counties were as follows:

Chesterfield (Sand Hills State Forest)	\$ 98,420.59
Sumter (Manchester State Forest)	41,821.63
Richland (Harbison State Forest)	317.07
Kershaw (Cassatt State Forest)	268.43
Darlington (Sand Hills State Forest)	1,348.55

In the past 22 years since the passage of this Act, the Forestry Commission has paid a total of \$1,796,329.04 to counties where the state forest lands are located as follows:

Chesterfield	\$1,124,018.99
Sumter	585,327.16
Richland	48,558.58
Kershaw	8,349.41
Darlington	30,074.90

Most of the Commission's research efforts were through cooperative studies with either Clemson University or Southeastern Forest Experiment Station.

Cassatt State Forest

The area containing 462 acres lies about two and one-half miles north of Cassatt, S. C. It was deeded to the state by J. R. West on May 28, 1935. A CCC Camp was located there and a fire tower and dwelling for the towerman were erected. Ten (10) acres were replanted to longleaf pine in 1978-79.

Sand Hills State Forest personnel have established and maintained a system of boundary firebreaks. Breaks have also been plowed around plantations and along the public road which crosses this property and all boundary lines have been permanently marked.

Harbison State Forest

Harbison State Forest, containing 2,188 acres, is located in Richland County. The Richland County fire control organization is responsible for fire protection and is assisted by a caretaker. No fires burned on the forest during the year.

Most of the Harbison area is well stocked and is in good growing condition. A planned program of cutting is in effect to improve the stand and maintain rapid growth. During the 28 years the state has owned this property, timber receipts have paid for the land purchase plus interest and all operating costs, and have returned a substantial amount to the state and county treasuries.

Manchester State Forest

The 28,830 acres of land in Manchester State Forest are located south of Wedgefield in Sumter County. From 1939 to 1955 this land was leased to the S. C. State Commission of Forestry on a long-term lease from the federal government. The state received fee title to this property on June 28, 1955. Most of the old fields except those being farmed have been planted to trees.

Four hundred (400) acres of land were rented for agricultural purposes during the year. Some of the tenants renting this land work part-time on the forest. Land rented is 103 acres less than previous years due to seed orchard expansion.

Game Management:

An intensified program of game management has been introduced in cooperation with Sumter County Game & Fish Association. In addition to utilizing "waste acres" under power lines, permanent wildlife fields and food patches have been established. This fiscal year receipts from hunting and fishing permits totaled \$5,806.00.

Of the 4,952 permits sold, 971 were for deer hunting. Forty-five (45) deer were killed, 19 more than last year. During the year 538 dove permits were sold, most of those for the first three hunts. Quail hunting accounted for 518 permits. Success was variable depending on knowledge of the area and ability of the dogs. Combination rabbit and squirrel permits totaled 704. Two thousand two hundred and twenty (2,220) fishing permits were sold.

Recreation other than hunting and fishing includes hiking, berry picking, sightseeing, motor cycling, horseback riding and field trials. During the fall of the year many ride through the forest to view the autumn foliage.

Tree Planting:

One hundred fifty-one (151) acres were planted this year. Longleaf pine was planted on 134 acres and 17 acres were planted with improved loblolly pine.

Forest Products Sold and Other Receipts 1978-79:

Sawtimber — 364,637 bd. ft.	\$ 59,690.85
Pulpwood — 3,665.76 cords	59,252.55
Rentals, leases, and miscellaneous	48,343.10
Hunting and Fishing	5,806.00
Total Receipts	\$173,082.50

Silvicultural Practices:

One hundred sixty-one (161) acres were cleared by root raking and 161 acres were plowed. The total area cleared of scrub oak and planted to pine on this forest is now 10,834 acres. Thirty-six (36) acres of pine were released from scrub oak competition and 916 acres prescribed burned.

Forest Fire Protection:

Eight forest fires occurred during 1978-79 burning a total of 80.5 acres. Monthly checks were made for insect and disease damage. Re-

search in cooperation with the Southeastern Forest Experiment Station is being continued.

In addition to the formal research projects, demonstration areas were used by Clemson students, 4-H clubs and other interested groups.

Shaw Air Force Base Lease:

The U. S. Air Force has leased approximately 8,000 acres of Manchester State Forest as a target range to train jet pilots in air-to-ground gunnery. According to the Air Force, damage will be confined to a few hundred acres.

Sand Hills State Forest

Sand Hills State Forest, located in the scrub oak-longleaf pine type in Chesterfield and Darlington Counties, consists of 92,000 acres. Half of this area is administered by the U. S. Fish and Wildlife Service as a wildlife refuge, but the State Commission of Forestry handled fire protection and forest management activities on the refuge and a multiple use forest on the other half. This area is leased from the federal government on a 95-year lease. During the fiscal year 1965-66, receipts from sales and rentals since acquisition exceeded all expenditures by the state on the area. All revenue over operating expenses is now to be expended on the area for further multiple use improvements and operations.

Before the area was acquired by the government, it was heavily cut over, badly burned and generally abused. As a result, major activities have consisted of tree planting, fire protection and other practices aimed at building up the productivity of the land and increasing the forest stands for timber and wildlife. Through the use of forest inventory information the cut and distribution of the various age groups of timber will be regulated.

Timber harvesting in this fiscal year has been to release natural seedlings in understocked stands, remove understocked stands for site preparation, thinnings and improvement cuts.

A revised management plan is in effect which emphasizes all multiple use concepts. It is planned for each larger area of the forest called a compartment to contain stands of various age groups and species composition plus openings of farm land and/or wildlife fields. Quality mast-producing hardwoods are maintained wherever the site permits their growth. Adequate consideration is given the red-cockaded woodpecker, which is an endangered species but plentiful on the Sand Hills.

Research is conducted on the forest by the Southeastern Forest Experiment Station and universities. Demonstration areas are maintained to instruct interested individuals and groups such as 4-H, Boy Scouts, Tree Farmers and foresters.

Tree Planting:

Tree planting consisted of areas clearcut and site prepared. A total of 187 acres were planted of the following species:

Longleaf	150,000
Improved Slash	6,000
Improved Loblolly	11,000
Total	167,000

Forest Receipts for 1978-79 Fiscal Year:

Timber Sales	\$415,616.61
Land Rental & Miscellaneous (stumps, pine straw, etc.) Receipts	25,432.77
Hunting and Fishing Permits	8,914.50
Total	\$449,963.88

Silvicultural Practices:

During the 1978-79 fiscal year, 2,314 acres were prescribed burned. One hundred and twenty (120) acres were burned and disked for planting and 55 acres were cleared and disked, part of this to be rented for watermelons one year and then planted with pine seedlings.

Fire Protection and Suppression:

All suitable boundary lines were disked and breaks disked along all major roads and railroads for fire protection. The prescribed burning listed above gives good protection due to the scattered pattern. Fourteen wildfires occurred, burning a total of 59.7 acres.

Recreation:

The Sugar Loaf Mountain recreation area continued to receive heavy use. Besides the naturally formed Sugar Loaf Mountain, which is about 150 feet high, there are 5 picnic shelters, a lake, fireplaces, a flowing well, parking areas, and latrines. Scout troops and other organized groups use this area and facilities for overnight camping. Many auto touring visitors drive through this forest, especially when the oak leaves color in the fall and to view the rhododendron near Sugar Loaf Mountain in the spring. A nature trail is available for hiking which winds through a branch and an undisturbed wooded area showing many species of mature trees.

Fish and Wildlife:

Hunting and fishing are conducted in season by permit on the forest area. Close cooperation by the Commission of Forestry, the State Wildlife Resources Commission and the U. S. Fish and Wildlife Service

prevails. Deer, dove, and quail food patches are planted and maintained by the Commission of Forestry.

There are 13 ponds available for fishing on the forest. These are maintained through fertilization and weed control. Fishing permits totaled 2,743 daily and 706 season for this year.

Dove, quail, squirrel, deer and rabbit hunting were permitted on the state forest portion of the Sand Hills State Forest. Permit sales totaled 329 for dove, 176 for squirrel, 1,007 daily and 3 season for quail, 87 daily and 87 two-week season for deer, and 30 daily for rabbit.

State Lands Forest Management Program

During fiscal year 1978-79 eight agencies requested and received forestry assistance. Management plans were prepared on 2 tracts totaling 773 acres. Forest products sales totaled 1,596,965 board feet of sawtimber and 2,584 cords of pulpwood for an income of \$261,246.04. Two hundred and ten acres were site prepared and 221 acres were planted to tree seedlings.

The following is a breakdown by agencies of work accomplished during 1978-79:

Dept. of Corrections — Sale of 37,751 board feet of sawtimber and 114 cords of pulpwood for an income of \$5,600.12.

Criminal Justice — Sale of 9 cords of pulpwood for an income of \$85.30.

Greenwood County — Sale of 206,398 board feet of sawtimber and 410 cords of pulpwood for an income of \$27,718.00.

John de la Howe School — Sale of 7,000 board feet of sawtimber and 306 cords of pulpwood for an income of \$5,085.23.

Division of State Parks — Sale of 678 cords of pulpwood for an income of \$5,321.18. One hundred fifty-one acres were site prepared and planted to tree seedlings. A management plan was prepared on 735 acres.

Ports Authority — Sale of 468,053 board feet of sawtimber and 257 cords of pulpwood for an income of \$79,980.00.

Wildlife and Marine Resources — Sale of 864,141 board feet of sawtimber and 810 cords of pulpwood for an income of \$136,094.01. Fifty-nine acres were site prepared and 70 acres were planted to tree seedlings. A management plan was prepared on 38 acres.

Dept. of Youth Services — Sale of 13,622 board feet of sawtimber for an income of \$1,362.20.

*State Lands Forest Management Program
1978-79 Forest Products Sales*

Agency & Sale No.	Purpose of Cut	Acres	Volume		Sale Price
			Bd. Ft.	Cords	
Dept. of Corrections					
Walden 3-1	Improvement Cut & Ice Salvage Cut	35	37,751	114	\$ 5,600.12
Criminal Justice					
Criminal Justice 3-M-1	Clear Construction Area			9	85.30
Greenwood County					
Greenwood AP 3-3	Improvement Cut & Regeneration Cut	90	206,398	410	27,718.00
John de la Howe School					
de la Howe 3-M-10	Power Line R-O-W & Bug Spot		7,000		1,000.00
de la Howe 3-M-11	Regeneration Cut Clean Up	24		104	222.99
de la Howe 3-10	Pulpwood Thinning	29		202	3,862.24
Division of State Parks					
Greenwood 3-M-4	Pulpwood Thinning			129	1,413.50
Greenwood 3-M-5	Ice Salvage			282	1,710.34
Lee 3-M-3	Pulpwood Thinning & Salvage			139	1,358.44
Little Pee Dee 3-M-1	Parking Lot Construction			14	130.32
Paris Mountain 3-M-10	Ice Salvage			114	683.58
Sesqui 3-M-9	Construction Site				25.00
Ports Authority					
Wando 3-1	Clear Construction Area	22	184,541	103	25,932.00
Wando 3-2	Clear Construction Area	40	283,512	154	54,048.00
Wildlife & Marine Resources					
Webb Center 3-M-4 (added)	Salvage			83	621.52
Webb Center 3-M-5	Pulpwood Thinning			68	881.66
Webb Center 3-M-6	Enlarge Wildlife Plot	1	3,291		427.83
Webb Center 3-9	Improvement Cut & Regeneration Cut	188	425,358	353	63,055.00
Webb Center 3-10	Improvement Cut & Regeneration Cut	202	435,492	306	71,108.00
Youth Services					
Willow Lane 3-M-6	Clear Construction Area		13,622		1,362.20
			1,596,965	2,584	\$261,246.04

The following table shows, by agencies, the number of acres for which long-range forest management plans have been prepared since the project began.

Department of Corrections	2,100
Greenwood County	1,343
John de la Howe School	1,403
Department of Mental Health	1,895
Department of Mental Retardation	2,033
S. C. State College	286
Dept. of Parks, Recreation & Tourism	43,345
Wildlife and Marine Resources	15,378
Department of Youth Services	481
	<u>68,264</u>

Management plans for other state agency lands will be made as requested and time permits.

Forestry Incentives Program (FIP) Agriculture Conservation Program (ACP)

The objective of the Forestry Incentives Program, authorized by Congress in 1973, is to intensify timber production and related multiple use benefits for non-industrial private landowners owning 1,000 acres or less of forest land.

FIP funds allocated to South Carolina for the 1978-79 program year totaled \$1,040,000. Funds not utilized in the previous year's program were carried over into the current year because of the "no year-end funding" spelled out in the original act. Cost share funds earned in 1978-79 totaled \$1,095,379.

1978-79 FIP Accomplishments

<i>Practice</i>	<i>No. Referrals</i>	<i>Acres Completed</i>	<i>Linear Feet</i>	<i>Cost Share Paid Out</i>
Bare Land Planting	123	3,338		\$ 65,002
Site Preparation & Planting	422	15,592		1,095,012
Timber Stand Improvement	2	55		1,650
TOTALS	547	18,985		\$1,161,664

FIP Accomplishment Summary

Total funds allocated to South Carolina for FIP since 1973 amount to \$5,229,940. Cost share funds earned through June 30, 1978 totaled \$3,436,142. The outstanding balance of \$1,793,798 is being held by County Agriculture Stabilization and Conservation Service (ASCS) offices until 1977 and 1978 practices are completed. Table 1 summarizes FIP accomplishments by practice since 1973-74.

Funds are available through the traditional Agriculture Conservation Program (ACP) for landowners who do not qualify for forest improvement cost-share funds under the present FIP guidelines, or for practices not included in FIP such as prescribed burning and firebreak construction.

1977-78 ACP Accomplishments

<i>Practice</i>	<i>No. Referrals</i>	<i>Acres Completed</i>	<i>Linear Feet</i>	<i>Cost Share Paid Out</i>
Bare Land Planting	46	538		\$10,768
Site Preparation and Planting	45	533		32,134
Timber Stand Improvement	1	12		360
Prescribed Burning	15	2,830		4,294
Firebreak Construction	8		84,040	385
TOTALS	115	3,913	84,040	\$47,941

FIP and ACP cost-share funds provide for payments up to 75 percent of the cost to carry out forest improvement practices. The landowner pays the remainder.

The FIP and ACP programs are administered by the Agriculture Stabilization and Conservation Service (ASCS). The South Carolina State Commission of Forestry is responsible for technical advice and assistance to landowners who apply for cost-share funds.

Table 1. Summary FIP Accomplishments

Fiscal Year	Bare Land Planting			Site Preparation And Planting			Timber Stand Improvement			Prescribed Burning			Firebreak Construction			Allocation	Cost Share Paid Out
	No. Cases	Acres	Dollars	No. Cases	Acres	Dollars	No. Cases	Acres	Dollars	No. Cases	Acres	Dollars	No. Cases	Feet	Dollars		
1973-74				MONEY NOT RECEIVED UNTIL APRIL 1, 1974. NO ACCOMPLISHMENTS COMPLETED												\$ 468,000	\$ 0
1974-75	82	1,848	30,397	212	5,941	335,862	12	291	3,480	10	887	666	18	186,225	984	629,000	371,689
1975-76	81	1,668	37,056	254	6,378	376,447	3	80	960	24	1,670	1,252	23	254,000	712	939,000	416,000
1976-77	105	2,354	46,657	305	8,786	537,439	5	118	1,416	9	682	512	12	98,675	238	1,037,940	586,262
1977-78	147	3,782	74,315	443	14,797	888,335	6	179	3,912	2	320	240	1	5,000	10	1,116,000	966,812
1978-79		3,338	65,002		15,592	1,095,012		55	1,650	Not Covered Under Program			Not Covered Under Program			1,040,000	1,095,379
TOTALS		12,990	253,427		51,494	3,233,095		723	11,418	45	3,559	2,670	54	543,900	1,944	5,229,940	3,436,142

Table 2. Summary by Districts

Forestry Incentives Program
Accomplishments Completed

District	Bare Land Plant			Site Prep & Plant			TSI			Prescribed Burn			Firebreaks		
	No.	Acres	Dollars	No.	Acres	Dollars	No.	Acres	Dollars	No.	Acres	Dollars	No.	Feet	Dollars
Camden	18	606	11,812	56	1,909	125,319									
Florence	5	159	3,180	24	973	64,637									
Kingstree	7	193	3,860	32	1,919	141,871									
Newberry	20	730	14,700	71	3,091	246,814									
Orangeburg	35	896	16,200	119	3,568	248,492									
Spartanburg	31	691	12,990	37	1,059	64,676									
Walterboro	7	113	2,260	83	3,073	203,203	2	55	1,650						
TOTALS	123	3,388	65,002	422	15,592	1,095,012	2	55	1,650						

Agriculture Conservation Program
Accomplishments Completed

District	Bare Land Plant			Site Prep & Plant			TSI			Prescribed Burn			Firebreaks		
	No.	Acres	Dollars	No.	Acres	Dollars	No.	Acres	Dollars	No.	Acres	Dollars	No.	Feet	Dollars
Camden	6	87	1,734	15	222	10,717									
Florence	3	33	660	3	24	1,602				6	1,505	2,257	3	21,840	107
Kingstree	1	32	640	3	63	4,520									
Newberry	7	99	1,980	3	20	1,445				2	375	612			
Orangeburg	13	143	2,862	16	148	9,868									
Spartanburg	11	49	992	2	17	1,190									
Walterboro	5	95	1,900	3	39	2,792	1	12	360	7	950	1,425	5	62,200	278
TOTALS	46	538	10,768	45	533	32,134	1	12	360	15	2,830	4,294	8	84,040	385

Nurseries

The Forestry Commission continued to operate four forest tree nurseries for the production and distribution of tree seedlings to landowners in South Carolina. These nurseries produced 43,009,533 seedlings for planting during the 1978-79 planting season. An additional 22,927,400 seedlings were either produced in state by industry nurseries or brought into the state by others. This made a grand total of 65,936,933 seedlings planted during the year.

The cost of seedlings f.o.b. nursery varied from \$9.00 to \$30.00 per thousand depending on species. A charge of \$2.00 per thousand was made for seedlings delivered to county seat by nursery trucks.

The demand for Commission grown seedlings during 1978-79 planting season was strong partially because of the Forestry Incentives Program. We were not able to meet all demands for loblolly pine seedlings but were able to supply other species requested. Seedling sales are expected to increase for the 1979-80 planting season.

Distribution of Seedlings

Of the 43,009,533 forest tree seedlings produced in state forest tree nurseries during the year, 4,645,500 seedlings were sold out of state.

Nursery production by species was as follows:

Improved Coastal Loblolly	7,430,000
Regular Coastal Loblolly	10,762,700
Improved Piedmont Loblolly	18,799,900
Regular Piedmont Loblolly	3,450,000
Improved Slash	251,500
Longleaf	893,200
Table Mtn.	3,800
White Pine	691,400
Scotch	1,800
Yellow-Poplar	35,500
Redcedar	222,300
Baldcypress	5,750
Virginia Pine	417,450
Black Walnut	25,225
Sycamore	15,050
Misc.	3,958
TOTAL	43,009,533

Seedlings of several species were furnished to the S. C. Department of Highways and Public Transportation to assist them in their project to beautify South Carolina highways. These seedlings consisted of 1,500 dogwood, 1,983 crepe myrtle and 375 redbud.

Seedlings of the S. C. Department of Highways and Public Transportation are included in the previously mentioned totals. Seedlings for this project will also be available for the 1979-80 planting season.

Tables in this report give a record of seedlings distributed by counties and class of ownership. Another table shows the total acreage planted and the number of areas in need of planting by counties.

Tables record the number of seedlings distributed in South Carolina by years including those shipped for planting out of state.

S. C. STATE COMMISSION OF FORESTRY
TREE SEEDLING DISTRIBUTION
BY
LANDOWNER CLASSIFICATION
1978-79

A. *State Nursery Source Seedlings Planted in the State:*

<i>Land Ownership</i>	<i>Percent of Total</i>	<i>No. Trees Planted</i>
Farmers	12.1	4,654,000
Other Individuals	21.2	8,133,725
Associations & Clubs	1.5	551,950
Lumber Companies	14.2	5,445,000
Pulp & Paper	39.5	15,166,000
Other Industry	8	3,053,500
Schools .....	.5	175,000
State Forest .....	.8	305,000
Other State Lands .....	.4	168,858
Cit, Town, Gov. ....	.1	38,000
Fed. Government	1.6	628,000
Watersheds .....	.1	45,000
TOTALS	100.0	38,364,033

B. *Other Source Seedlings Planted in the State:*

Continental Forest Industries	1,450,000
Federal Paper Board	1,514,000
Georgia Forestry Comm.	44,200
Hiwassee Land Co.	3,368,000
Holly Hill Lumber Co.	600,000
Morgan Nursery	300,000
N. C. Forestry Comm.	2,883,000
Edwards Nursery	830,000
Walker Nursery	3,000
Westvaco Nursery	10,232,500
Union Camp	1,335,700
TOTAL	22,927,400
TOTAL SEEDLINGS PLANTED IN THE STATE	61,291,433

C. *State Nursery Source Seedlings Shipped Out of State:*

4,645,500

D. Direct Seeded:

Acres

Canal Industries	78
Lightsey Brothers	200
Union Camp	5
	<u>283</u>

CUMULATIVE TREE PLANTING RECORD AND PLANTING NEEDS — ALL SOURCES

County	Seedlings Planted 1929-78	Seedlings Planted 1978-79	Grand Total Planted to date 1929-79	Acres Planted 1929 thru 6/30/79	Acres in need of Planting 6/30/79
Abbeville	34,618,787	1,127,000	35,745,787	38,441	105,921
Aiken	159,411,593	2,826,500	162,238,093	166,091	203,970
Allendale	55,063,595	1,776,700	56,840,295	58,908	27,422
Anderson	35,216,124	186,500	35,402,624	36,322	105,262
Bamberg	30,618,984	571,000	31,189,984	32,279	32,333
Barnwell	90,725,256	755,000	91,480,256	83,341	53,451
Beaufort	16,148,345	461,500	16,609,845	17,835	45,806
Berkeley	66,389,016	2,920,000	69,309,016	76,509	54,343
Calhoun	18,562,495	862,000	19,424,495	20,489	41,041
Charleston	15,622,750	1,973,500	17,596,250	20,000	56,117
Cherokee	20,352,079	88,500	20,440,579	21,431	55,346
Chester	45,664,939	1,574,000	47,238,939	51,421	122,657
Chesterfield	98,059,165	1,671,000	99,730,165	104,205	131,842
Clarendon	32,673,320	1,590,600	34,263,920	36,929	8,390
Colleton	59,296,526	3,311,000	62,607,526	79,375	76,531
Darlington	21,592,745	916,000	22,508,745	24,506	37,280
Dillon	13,900,690	231,500	14,132,190	15,166	23,467
Dorchester	36,800,666	1,102,500	37,903,166	40,319	66,675
Edgefield	36,079,118	1,320,500	37,399,618	41,145	30,278
Fairfield	46,501,941	2,286,450	48,788,391	51,768	97,112
Florence	14,592,023	336,258	14,928,281	16,667	45,376
Georgetown	65,878,000	3,117,000	68,995,000	74,102	33,150
Greenville	21,130,104	510,550	21,640,654	22,515	97,837
Greenwood	44,888,845	3,014,000	47,902,845	43,368	32,260
Hampton	56,364,779	2,604,900	58,969,679	63,342	58,204
Horry	43,048,645	1,464,500	44,513,145	48,415	87,022
Jasper	52,161,130	1,146,500	53,307,630	57,243	36,648
Kershaw	133,816,617	1,978,000	135,794,617	141,931	98,303
Lancaster	41,111,724	869,500	41,981,224	45,194	98,055
Laurens	57,908,195	1,876,500	59,784,695	63,639	99,133
Lee	17,043,440	410,500	17,453,940	18,319	52,660
Lexington	44,195,447	632,875	44,828,322	46,324	139,662
Marion	19,182,455	600,000	19,782,455	22,168	36,201
Marlboro	34,772,058	699,000	35,471,058	38,277	18,481
McCormick	22,894,275	337,000	23,231,275	25,758	62,401
Newberry	40,901,802	1,796,500	42,698,302	46,892	66,510
Oconee	24,232,373	514,500	24,746,873	26,023	147,906
Orangeburg	66,513,451	2,401,500	68,914,951	73,425	27,417
Pickens	19,364,125	239,500	19,603,625	20,447	97,198
Richland	46,373,615	1,140,950	47,514,565	49,900	111,084
Saluda	17,892,551	1,252,300	19,144,851	21,183	34,812
Spartanburg	42,746,146	664,250	43,410,396	45,019	95,854
Sumter	49,406,702	751,100	50,157,802	52,132	40,523
Union	46,109,378	795,500	46,904,878	51,020	63,826
Williamsburg	39,686,842	3,096,000	42,782,842	48,409	28,312
York	39,889,496	1,490,500	41,379,996	43,269	100,493
TOTAL	2,025,402,352	61,291,433	2,086,693,785	2,221,461	3,184,562
Out of State	52,641,678	4,645,500	57,287,178	—	—
Grand Total	2,078,044,030	65,936,933	2,143,980,963	2,221,461	3,184,562

**SOUTH CAROLINA STATE COMMISSION OF FORESTRY
SEEDLING DISTRIBUTION FROM STATE NURSERIES AND
OTHER SOURCES BY COUNTIES, SPECIES AND AMOUNTS
1978-79**

County	Improved Coastal Lob.	Regular Coastal Lob.	Improved Piedmont Lob.	Regular Piedmont Lob.	Slash	Longleaf	Table Mtn. Pine	White Pine	Scotch
Abbeville			738,500	383,000				3,000	
Aiken	209,000	315,000	1,551,000	564,000	6,500	144,000		10,000	500
Allendale	607,700	786,500	342,000					1,000	
Anderson		2,000	72,000	3,000	1,500	1,000		77,500	
Bamberg	22,500	278,500	184,000	53,000	1,000	500		1,500	
Barnwell	80,000	275,500	390,000					1,500	
Beaufort	16,500	196,000			19,500			500	
Berkeley	818,000	2,084,500			3,000	5,500		500	
Calhoun	111,500	624,000	94,000		500	5,000		2,500	
Charleston	306,000	1,621,000			20,000	10,000		2,500	
Cherokee		1,000	63,500					14,500	
Chester			1,187,500	377,000		500		1,500	
Chesterfield		201,000	1,087,500	132,000	2,000	235,000		3,500	
Clarendon	778,000	772,500	32,500			500		2,000	
Colleton	218,000	2,397,500	1,000		6,000	21,500	500	2,000	
Darlington	127,500	433,000	312,000	15,000	1,500	5,000		7,500	
Dillon	75,000	89,500		55,000	4,500	500		1,500	
Dorchester	131,000	962,000				500		1,500	
Edgefield		107,500	1,063,000	126,000			500	2,500	
Fairfield		45,000	1,538,500	695,000				1,000	
Florence	185,000	119,500			3,500	10,500	500	2,500	
Georgetown	1,045,000	1,923,500	95,000		48,500	500		500	
Greenville			243,800	85,000	500	4,500		102,500	
Greenwood			2,778,000	216,000				2,500	
Hampton	506,900	1,760,500				5,000		1,500	
Horry	1,384,000	58,500		5,000				1,000	
Jasper	39,000	907,000			197,000	2,000		1,000	
Kershaw		559,000	1,253,000	141,000		2,500		7,000	
Lancaster		2,000	656,500	195,000				9,500	
Laurens		1,000	1,504,000	313,500		1,000	500	20,000	
Lee	15,000	383,000	1,000		5,000	2,000		4,000	
Lexington	77,000	56,500	195,500		2,000	235,200	500	15,100	500

**SOUTH CAROLINA STATE COMMISSION OF FORESTRY
SEEDLING DISTRIBUTION FROM STATE NURSERIES AND
OTHER SOURCES BY COUNTIES, SPECIES AND AMOUNTS
1978-79 — Continued**

<i>County</i>	<i>Improved Coastal Lob.</i>	<i>Regular Coastal Lob.</i>	<i>Improved Piedmont Lob.</i>	<i>Regular Piedmont Lob.</i>	<i>Slash</i>	<i>Longleaf</i>	<i>Table Mtn. Pine</i>	<i>White Pine</i>	<i>Scotch</i>
Marion	286,000	186,500	102,000		1,000	2,000		11,000	500
Marlboro	45,000	326,500	257,500		3,500	55,000		2,000	
McCormick			191,500	145,000				500	
Newberry		176,000	1,199,500	412,000				1,000	
Oconee			220,000	173,000	500	1,500		103,500	
Orangeburg	393,000	1,879,000	77,000		5,500	10,000		7,500	
Pickens			39,000	27,000	500	1,000	1,000	131,500	
Richland	209,000	656,200	236,600		7,000	8,000		5,000	
Saluda	77,800	106,000	855,500	200,000				5,500	
Spartanburg			564,500	33,500	1,500	3,000		39,000	
Sumter	396,500	168,500	43,000		2,500	119,500	300	4,800	300
Union			704,500	84,000				4,000	
Williamsburg	744,000	2,344,000			500	500		1,500	
York	6,000		944,500	496,000	1,500			10,000	
SUB-TOTALS	8,909,900	22,805,200	20,818,900	4,929,000	346,500	893,200	3,800	631,900	1,800
OUT OF STATE		300,000	3,308,000	924,000	4,000			59,500	
TOTALS	8,909,900	23,105,200	24,126,900	5,853,000	350,500	893,200	3,800	691,400	1,800

**SOUTH CAROLINA STATE COMMISSION OF FORESTRY
SEEDLING DISTRIBUTION FROM STATE NURSERIES AND
OTHER SOURCES BY COUNTIES, SPECIES AND AMOUNTS
1978-79 — Continued**

County	Yellow Poplar	Redcedar	Baldcypress	Virginia Pine	Black Walnut	Sycamore	Misc.	Totals	Direct Seeded
Abbeville	500	500		1,500				1,127,000	
Aiken	1,000	9,000	500	12,000	500	500	300	2,826,500	
Allendale		2,000		500			37,000	1,776,700	
Anderson		11,000		18,000	500			186,500	
Bamberg	500			500			29,000	571,000	
Barnwell		7,000		500		500		755,000	
Beaufort	500	5,500	500	1,500			221,000	461,500	
Berkeley		3,500		3,500	1,000	500		2,920,000	
Calhoun	500	2,000	1,500	6,000	14,000	500		862,000	
Charleston	1,000	3,500		9,500				1,973,500	
Cherokee				9,500				88,500	
Chester				7,000	500			1,574,000	
Chesterfield		7,000		3,000				1,671,000	
Clarendon		2,000		1,500			1,600	1,590,600	
Colleton		3,500		1,000			660,000	3,311,000	200
Darlington	3,000	7,500		4,000				916,000	
Dillon	500	2,000		3,000				231,500	60
Dorchester		3,500		4,000				1,102,500	
Edgefield		4,000		17,000				1,320,500	
Fairfield		1,500	1,250	3,000	1,200			2,286,450	
Florence		6,500	1,500	2,500	2,000		2,258	336,258	
Georgetown		500		3,500				3,117,000	
Greenville	13,500	10,500		44,750	5,500			510,550	
Greenwood	500	3,000		13,000	500	500		3,014,000	
Hampton		4,500		500			326,000	2,604,900	
Horry		15,500		500				1,464,500	
Jasper		500						1,146,500	5
Kershaw	500	6,000		8,000		1,000		1,978,000	
Lancaster		500		5,500		500		869,500	
Laurens	500	5,000		31,000				1,876,500	
Lee		500						410,500	
Lexington	500	26,500		23,500	25	50		632,875	

**SOUTH CAROLINA STATE COMMISSION OF FORESTRY
SEEDLING DISTRIBUTION FROM STATE NURSERIES AND
OTHER SOURCES BY COUNTIES, SPECIES AND AMOUNTS
1978-79 — Continued**

<i>County</i>	<i>Yellow Poplar</i>	<i>Redcedar</i>	<i>Baldcypress</i>	<i>Virginia Pine</i>	<i>Black Walnut</i>	<i>Sycamore</i>	<i>Misc.</i>	<i>Totals</i>	<i>Direct Seeded</i>
Marion		1,000		10,000				600,000	18
Marlboro	1,000	6,000		1,500		1,000		699,000	
McCormick								337,000	
Newberry	5,500	500		2,000				1,796,500	
Oconee	1,000	4,000	500	8,500	2,000			514,500	
Orangeburg	1,500	11,500		11,000	1,500	4,000		2,401,500	
Pickens		4,000		34,000	1,500			239,500	
Richland	500	13,000		5,650				1,140,950	
Saluda		1,000		6,500				1,252,300	
Spartanburg	1,500	8,000		13,250				664,250	
Sumter	500	10,300		4,800			100	751,100	
Union		2,000		500		500		795,500	
Williamsburg		5,500						3,096,000	
York	1,000	1,000		30,500				1,490,500	
SUB-TOTALS	35,500	222,300	5,750	367,450	25,225	15,050	1,279,958	61,291,433	283**
OUT OF STATE				50,000				4,645,500	
TOTALS	35,500	222,300	5,750	417,450	25,225	15,050	1,279,958*	65,936,933	283**

<i>Miscellaneous Species</i>		<i>Direct Seeded</i>	<i>Acres</i>
Sand Pine	8,000	Improved Coastal Lob.	18
Livingston Parrish Lob.	37,000	Regular Piedmont Lob.	60
Louisiana Lob.	1,231,000	Slash	200
Dogwood	1,500	Louisiana Lob.	5
Crepe Myrtle	1,983		283**
Redbud	375		
Deodar cedar	100		
TOTAL	1,279,958*		

<i>Year</i>	<i>Total Distributed (State Nurseries)</i>	<i>Total Distributed (Inc. Other Sources)</i>
1928-29	142,000	142,000
1929-30	148,000	148,000
1930-31	986,000	986,000
1931-32	976,000	976,000
1932-33	996,000	996,000
1933-34	1,031,000	1,031,000
1934-35	7,529,000	7,529,000
1935-36	23,000,000	23,000,000
1936-37	22,000,000	22,000,000
1937-38	11,192,000	11,192,000
1938-39	10,854,000	10,854,000
1039-40	12,244,000	12,244,000
1940-41	21,165,423	21,165,423
1941-42	10,275,037	10,275,037
1942-43	4,742,010	4,742,010
1943-44	5,662,608	5,662,608
1944-45	1,926,840	1,926,840
1945-46	6,402,255	6,402,255
1946-47	1,962,600	1,962,600
1947-48	11,356,990	11,356,990
1948-49	30,338,775	30,338,775
1949-50	29,501,955	29,501,955
1950-51	20,615,315	20,615,315
1951-52	16,619,000	16,619,000
1952-53	22,035,850	32,246,298
1953-54	36,210,100	42,852,314
1954-55	35,373,025	45,182,255
1955-56	34,413,550	42,931,755
1956-57	55,753,600	69,658,736
1957-58	60,846,200	93,369,084
1958-59	123,985,000	166,351,000
1959-60	147,146,365	187,516,418
1960-61	145,609,075	158,330,575
1961-62	71,892,420	83,844,470
1962-63	56,191,241	64,201,541
1963-64	51,445,597	62,423,597
1964-65	49,009,893	60,683,493
1965-66	42,310,685	56,529,185
1966-67	48,575,190	69,597,590
1967-68	39,970,136	58,812,136
1968-69	29,529,285	51,453,285
1969-70	31,415,430	49,202,630
1970-71	31,939,880	54,540,880
1971-72	23,677,925	41,357,225
1972-73	30,977,800	45,239,100
1973-74	28,443,000	42,305,500
1974-75	40,081,500	55,996,500
1975-76	40,664,387	59,063,387
1976-77	39,795,375	59,238,275
1977-78	45,734,500	64,380,200
1978-79	43,009,533	65,936,933
TOTALS	1,657,703,350	2,134,911,170

Forest Tree Seed Collection

Each year the Forestry Commission collects cones and other fruit to obtain seed for tree seedling production. Field offices locate private collectors in good seed producing areas to obtain part of the seed that is needed. An increasing amount of seed is now being obtained from our tree seed orchards. These cones are collected by Commission personnel. The seed crop for this year was fair to good. Cones and seed collected were as follows: slash pine from seed orchard, 142 bushels; Coastal loblolly pine cones from seed orchards, 311 bushels; Piedmont loblolly pine cones from seed orchards, 1,532 bushels; regular coastal loblolly pine cones, 315.5 bushels; white pine cones, 375.5 bushels; sweetgum, 6 bushels; baldcypress, 2 bushels; walnut, 263 bushels; dogwood, 13.25 quarts; redcedar, 34 pounds.

In addition 80 pounds of clean white pine seed and 60 pounds of deodar cedar seed were bought from commercial companies.

The seed extractory was operated for the twenty-second year with continued good results. Seed costs for 1978-79 averaged \$15.21 per pound for seed orchard cones and \$35.35 for others. Seed orchard seed is valued nationally at \$150 to \$300 per pound when available at all.

Seedling Survival

One year after seedlings are planted in the fields, approximately 10% of the plantings in each county are sampled to determine the overall state survival rate. Through these examinations, the Forestry Commission can determine the reason for failures and recommend steps to eliminate such failures in the future. This year the overall state seedling survival indicated by the sampling was 69% compared to 59% the previous year.

Research

The Forestry Commission continued with cooperative research projects with Clemson University. A study has been initiated to determine the effectiveness of a chemical "Maintain" which restricts height growth in seed beds allowing seedlings to be carried over for possible summer planting. It is felt the restricted growth may make this practical.

Another field of research is the growth and summer outplanting of containerized seedlings. Research in this work includes longleaf, loblolly and white pines. It is hoped we can get good survival of containerized longleaf seedlings. Containerized seedlings grown over the winter in a greenhouse were outplanted in the Sand Hills State Forest.

Forest Tree Improvement

A forest tree improvement program was begun in 1963 for the purpose of providing genetically improved seed for all loblolly, slash and longleaf seedlings grown at Commission Nurseries. Seed orchards have been established as follows:

Piedmont Loblolly Pine (disease resistant)	5	acres
Piedmont Loblolly Pine	40	acres
Coastal Loblolly Pine (disease resistant)	5	acres
Coastal Loblolly Pine	31	acres
South Carolina Slash Pine	44	acres
Georgia Slash Pine	34	acres
Longleaf Pine	12	acres
Coastal Loblolly Pine (1.5 generation)	25	acres
Coastal Loblolly Pine (2nd. generation)	1.5	acres
Arizona Cypress	1.25	acres
TOTAL	198.75	acres

The Green Savannah Seed Orchard was damaged by a wildfire in April. The fire killed 1,013 grafted trees which had been in the orchard from 1 month to 3 years. Three thousand grafts were made in the field to replace these seed trees and to add to the number in the orchard. An additional 790 trees were grafted for this orchard at Coastal Seed Orchard.

Eleven hundred and ninety six grafts were made for the second generation loblolly seed orchard. To begin a Virginia pine seed orchard, 407 grafts were made.

Cones collected and seed yields from seed orchards during October 1978 were as follows:

<i>Species</i>	<i>Bushels Cones Collected</i>	<i>Pounds of Seed per Bushel</i>	<i>Total Pounds Seed</i>
Piedmont Loblolly (regular)	756	1.32	994
Piedmont Loblolly (early)	775	1.35	1,045
Coastal Loblolly	301	1.10	331
S. C. Slash Pine	842	.40	347
Georgia Slash Pine	127	.45	47

It is anticipated that this seed will produce 16,000,000 Piedmont loblolly pine, 2,648,000 Coastal loblolly pine and 4,500,000 slash pine improved seedlings. The improved tree seedlings produced from these seed will be available to landowners for outplanting during the 1979-80 planting season.

Progeny test plantings were continued for the eighth year and included Piedmont loblolly pine, Coastal loblolly pine, Georgia slash pine and South Carolina slash pine. A total of 30 acres of progeny tests were planted in February increasing the total progeny acreage to 250.5 acres.

Measurements were made in the five year old progeny test plantings. Data from these measurements will be used to determine the superiority of the selected clones. Selections are being made from these plantings for use in second generation seed orchards.

The Forestry Commission continued as a member of the North Carolina State University Industry Tree Improvement Program.

Anticipated 1979-80 Seedling Production

Planned production of seedlings for the 1979-80 planting season is approximately 53,000,000. Seedling production has been increased to provide for landowners participating in the Forestry Incentives Program. Species for distribution will include improved loblolly, loblolly, improved slash, longleaf, improved Virginia pine, white pine, black walnut, baldcypress, sycamore and redcedar.

Young Adult Conservation Corps (YACC)

The Young Adult Conservation Corps (YACC) was funded under Title VIII of the Comprehensive Employment and Training Act (CETA) and is an agreement between the Secretary of Labor and the Secretaries of Agriculture and Interior.

The purpose of the YACC is to provide employment and other benefits to young men and women, ages 16-23, who would not otherwise be currently productively employed. They engage in useful conservation work and aid in completing other projects of a public nature on Federal and non-Federal public lands and waters.

The Forestry Commission contracted with the CETA Division of the Governor's office to employ 20 YACC corps members plus a staff of two forest technicians and a secretary.

Projects were set up at Sand Hills State Forest — six members; Fulton Creech Seed Orchard — ten members; Piedmont Nursery — four members. In March, 1979 eight more members were hired making a total of 28 corps members.

The corps members assist with routine work on the state forest and nursery properties in addition to performing jobs requiring funds where state funds were not available.

Activities include: construction, finishing concrete, painting and repair work of buildings, windrow removal, timber stand improvement, construction of fences, planting seedlings and seed orchard grafts, graft-

ing rootstock, harvesting genetically improved pine seed, replacing irrigation valves, lifting and racking seedlings, beautification projects and other work relating to forestry.

Besides providing meaningful employment, an effort is made to train the YACC corps members in skills that will make them more competitive in the job market.

The YACC program is a good one that produces beneficial effects, not only for the corps members, but for South Carolina's landowners interested in planting trees.

South Carolina Tree Farm System

The South Carolina Tree Farm program gives public recognition to private timberland owners who are doing outstanding jobs in managing their forest lands, thereby encouraging others to do likewise. The basic aim of the Tree Farm program is to place more woodland under good forest management practices to bring continuing benefits to the owners and produce more and better forest products and services.

To become a Tree Farmer a landowner must demonstrate the desire and ability to protect his trees from fire, insects, disease, and destructive grazing. In addition, he must apply sound cutting practices to improve the growth of the timber stand. Forestry measures designed to insure the growing and harvesting of repeated tree crops must be followed, including measures to assure satisfactory reproduction, either from natural seeding or planting.

Before a woodland may be certified as a Tree Farm it must be inspected by a qualified forester who submits an Inspection record for consideration by the State Tree Farm Committee. When a property is approved as a Tree Farm, the owner is given a certificate and a diamond-shaped green and white sign denoting his membership in the Tree Farm System. It is hoped that his neighbors and others who see the sign and the good forestry practices will come to better understand forest values and forestry practices.

The South Carolina Tree Farm System is sponsored by the local forest industries through the Southern Forest Institute which is the southern affiliate of the national organization, the American Forest Institute. The S. C. State Commission of Forestry, the Clemson University Extension Service and consulting foresters and woodland owners in South Carolina cooperate and assist with the program. A Tree Farm Committee, made up of representatives from the above mentioned industries and organizations, administers the program.

As of June 30, 1979, there were 863 Tree Farms in the state, comprising 2,752,875 acres.

Plans are being made in South Carolina to designate certain interested forest landowners as Pioneer Tree Farmers. For a two-year

period inspecting foresters would work with them to instigate the forest management practices needed so that they would qualify for certification as a Tree Farmer. If the management goal is not reached in the two year period, the Pioneer Tree Farmer would be either dropped from the program or he would be reenlisted for an extended time.

INSECT AND DISEASE

Forest Insect and Disease Control Activities

The Commission of Forestry cooperates with the State Plant Pest Regulatory Service and the U. S. Forest Service, Division of Forest Pest Management, in a program to prevent, detect, evaluate, and suppress forest pests. Cooperative agreements with these two agencies make available to the Commission of Forestry additional technical assistance of their well trained and experienced entomologists and pathologists. The Commission's staff is comprised of a forest pathologist and a forest entomologist.

The current forest pest detection and reporting system involves the reporting by field foresters of forest pests that are causing abnormal losses, require control action, or which may present new problems. Aerial surveys are made periodically of specific pests to determine occurrence and the need for suppression action.

Two aerial reconnaissance surveys were made to detect southern pine beetle occurrence. These surveys were conducted in the piedmont and coastal plains region where the beetle outbreak occurred from 1971-76. The second survey, conducted in June, 1979, revealed increasing southern pine beetle activity in the piedmont region of the state. Large, multiple tree infestations containing high beetle populations were found in many piedmont counties. These factors indicate the beginning of another outbreak in this area. Suppression surveys are planned for fiscal year 1980 to locate infestations for salvage control. Both of these surveys revealed endemic beetle occurrence in the coastal plains regions.

Oak wilt disease is known to occur in Chesterfield, Kershaw, Lancaster, Lee and Richland Counties. It appears to be spreading very slowly and causing losses to low value oaks. Since there is potential for loss in valuable trees such as shade trees, periodic surveys are made to keep up with the spread.

Dutch elm disease has been confirmed in Aiken, Anderson, Chester, Chesterfield, Edgefield, Fairfield, Greenville, Greenwood, Lancaster, Laurens, Lexington, Newberry, Oconee, Pickens, Richland, Saluda, Spartanburg and York Counties. It probably occurs in other piedmont counties and is expected to gradually spread throughout the state. The primary agent of spread, the smaller European elm bark beetle, occurs statewide.

Commission foresters made approximately 989 field inspections of insect and disease problems. Appropriate recommendations for preven-

tion and control were given each case. Numerous inquiries were handled by telephone, mail, and personal contact that did not require field inspections.

FOREST FIRE PROTECTION

Introduction

Beginning in 1945 with the passage of the State Forest Fire Protection Act, all state and privately owned lands have been provided intensive forest fire protection by the South Carolina State Commission of Forestry.

Within South Carolina there are 12,050,000 acres of state and privately owned woodlands now under protection. An additional 592,319 acres of National Forest lands are protected by the U. S. Forest Service. Other federal agencies own and protect another 58,100 acres of land in South Carolina.

Organization:

As an organization, the State of South Carolina is divided into two regions — the Coastal Region, consisting of four districts, Florence, Kingstree, Orangeburg, and Walterboro; and the Piedmont Region, consisting of three districts, Camden, Newberry, and Spartanburg and two State Forests, Sand Hills and Manchester. The fire control activities of the state are coordinated and supervised by two Regional Foresters. In addition, each district is supervised by a District Forester, and each state forest is supervised by a Forest Director. Each of the seven districts consist of several county fire control organizations that work directly with landowners on forest fire prevention, detection and suppression activities. In charge of each of the 46 county units within the seven districts is a County Ranger, who supervises the activities of all Wardens and Tower Operators within the county.

Assisting the various county organizations are the many volunteer personnel encountered while conducting fire control activities. A total of 13,716 volunteer personnel assisted during 1978-79.

Cooperative Agreement with the U. S. Forest Service:

A formal agreement is maintained between the S. C. State Commission of Forestry and the U. S. Forest Service whereby each party agrees to render assistance to the other in detecting and suppressing forest fires along National Forest boundaries.

Fire Protection Activities

Fire Control Progress Checks:

Periodically, district fire control progress checks are conducted to examine the status and progress of all phases of the fire control program

within a district. These progress checks which are conducted by the Columbia Fire Control Staff contribute significantly to the efficiency of the over-all Fire Control Program.

Law Enforcement:

During fiscal year 1978-79 the Forestry Commission had a total of one hundred employees commissioned as law enforcement officers. These officers are trained in the various aspects of forest fire law enforcement and are empowered by the Governor to enforce forest fire laws in the state. Forest fire law enforcement within South Carolina is accomplished with the cooperation of the State Law Enforcement Division (SLED), County Sheriffs, and other local officers. As in previous years, the cooperation from all law enforcement agencies was excellent.

Law Enforcement records for this year show a total of 108 prosecutions and 104 convictions relating to violations of the state forest fire laws. Eight (8) prosecutions and 8 convictions were recorded under the Intentional Burning Law; 43 prosecutions and 40 convictions under the Careless and Negligent Law; 57 prosecutions and 56 convictions under the Burning Notification Law.

Burning Notification Law:

On June 24, 1969, the Governor signed a statewide Notification of Intent to Burn Law for South Carolina. This statewide law repealed burning permit laws in eight counties and burning notification laws in twenty-six counties which had been passed on a county-by-county basis. The State Forester may direct that fires covered in the Notification Act not be started when deemed necessary in the interest of public safety. Burning notifications totalled 63,548 during this fiscal year.

Fire Plans:

Each of the state's 46 counties is provided a fire control plan that guides and controls the various fire suppression activities within the county. These plans are kept current and revised to conform with changing conditions and the latest operating procedures.

A similar type of fire control plan is prepared for landowners who request assistance and guidance in maintaining adequate forest fire protection for their woodlands.

Forestry Study Committee:

The Forestry Study Committee was started in 1955 and has been continued each year by the General Assembly.

A series of hearings and meetings on all phases of forestry are held by this Committee each year and the recommendations formulated are summarized in an annual report to the General Assembly.

Members of the Forestry Study Committee during 1978-79 were: R. Scott Wallinger, Chairman; General Harry M. Arthur, Vice-Chairman; S. Ashley Abel; L. Theodore Chewning; LaVerne H. Fenters; J. Harry Hanna; John M. Hatcher; Harold R. Lott; T. Ed Garrison; Frank H. McGill; James M. Waddell, Jr.; L. Edward Bennett; Edward W. Simpson, Jr.; and Charles L. Griffin, III. The Study Committee was continued for the 1979-80 fiscal year.

Southeastern State Forest Fire Compact Commission:

In 1954 the General Assembly passed legislation enabling South Carolina to join with nine (9) other southeastern states to form a Forest Fire Compact Commission. Other states belonging to the Commission are: Alabama, Georgia, Florida, Kentucky, Mississippi, North Carolina, Tennessee, Virginia and West Virginia. The membership of the Commission from each state is composed of a Compact Administrator (the State Forester) and a four-member Advisory Committee. The Advisory Committee for South Carolina consists of: Leonard A. Kilian, Jr., State Forester, Chairman; Senator L. Marion Gressette, Calhoun County; Representative Fred Moore, Honea Path; and three (3) positions are currently vacant.

Twenty-Fourth Annual Meeting (SSFFCC) – June 19, 1978:

The twenty-fourth annual meeting of the Southeastern States Forest Fire Compact Commission (SSFFCC) was held on June 19, 1978 at Hot Springs, Arkansas. State Forester C. W. Moody of Alabama was elected Chairman for the following year and Leonard A. Kilian, Jr., South Carolina State Forester was elected Vice-Chairman. Roger C. Hatch, U. S. Forest Service, Atlanta, is Secretary-Coordinator.

Southern States Fire Chiefs Meeting:

The meeting of the Southern States Fire Chiefs was held in Biloxi, Mississippi on May 21-23, 1979.

The state of North Carolina will host the next Fire Chiefs meeting and the South Carolina Fire Chief will be the program chairman.

Fire Towers:

The Forestry Commission's basic forest fire detection program is accomplished primarily by the interlocking network of 140 forest fire lookout towers. Operating year around, these towers are strategically located so that each tower's normal range of visibility overlaps with the next adjoining tower's area. With such overlapping coverage, all smokes and suspected wildfires can be observed, located, and checked out. Temporary manning of Northampton Tower (U. S. Forest Service) by State Forestry Commission personnel began in 1973-74 and manning of Woodlawn Tower (U. S. Forest Service) began in 1974-75.

The U. S. Forest Service operates 6 lookout towers on the Sumter and Francis Marion National Forests. Tower operators in state and federal towers cooperate in spotting and reporting fires that occur within their range of visibility. Radio communications are maintained between state and federal towers at Kelly-Whitmire, Northampton-Witherbee, and McCormick-Liberty Hill. Detection through the use of spotter aircraft is used extensively by the U. S. Forest Service in South Carolina and in many areas supplemental forest fire detection by towers is performed only on higher fire danger days.

S. C. Disaster Preparedness Agency (Civil Defense):

On April 6, 1973 an act was signed by the Governor providing for Civil Defense and Disaster Control in South Carolina. This act set up an agency to be designated as the South Carolina Disaster Preparedness Agency (formerly Civil Defense).

The South Carolina State Commission of Forestry maintains contact with the S. C. Disaster Preparedness Agency and cooperates closely with them on matters concerning all emergencies and natural disasters that occur. The Forestry Commission also provides communications between Disaster Preparedness Headquarters and local Civil Defense chairmen during civil defense alerts and exercises.

Forestry Commission personnel have also been trained and act as radiological monitors in conjunction with the state's Disaster Preparedness Program. One set of monitoring instruments is kept in each county and four employees are trained as operators. All monitoring instruments are provided and maintained by the Disaster Preparedness Radiological Laboratory.

Forestry Commission personnel also participated in several one-day exercises conducted by the S. C. Disaster Preparedness Agency. These exercises included a one-day conference on Fire Suppression Assistance and a conference and practice exercise on the operation of a Damage Assessment Organization.

Forestry Commission representatives cooperated closely with Disaster Preparedness officials in the preparation of the South Carolina Comprehensive Disaster Preparedness Plan. Copies of this plan have been completed and were distributed to all District Foresters during the 1976-77 fiscal year.

Aircraft Use

Aerial Detection:

Several periods of dry hazardous forest fire weather prompted the need for use of aerial detection during fiscal year 1978-79. Flying is normally conducted during adverse fire weather to supplement the fire

towers and detect and check out all fires which occur. Other uses include directing fire fighting activities from the air and law enforcement work.

Use of aircraft in the fire control program has greatly contributed to the efficiency of the suppression activities. Trained observers and special communications equipment is supplied by the Forestry Commission.

Air Tanker Program:

During this fiscal year an air tanker project was carried out during the Spring fire season. Three air tankers were under contract from February 15 to April 15. One tanker was used until April 25.

Under a contract with Ralco, Inc. of Cheyenne, Wyoming, three 1,000 gallon tankers were used. One tanker was stationed at Camden and made seven drops on five forest fires. Another tanker was stationed at Georgetown and made 25 drops on 20 forest fires. The third tanker was stationed at Walterboro, making thirty-three drops on eight forest fires. There was a total of 33 fires fought with air tankers in connection with ground equipment. It was estimated that this program saved 2,377 acres of high value young forest valued at \$688,784. The cost/benefit ratio for this new program was 1 to 8.3.

SUMMARY OF AIRCRAFT USE Fiscal Year 1978-79

Month	Camden Hours	Florence Hours	Kingstree Hours	Newberry Hours	Orangeburg Hours	Spartanburg Hours	Walterboro Hours	Total Hours
October	—	18.1	12.7	3.3	15.2	6.8	5.5	61.6
November	—	42.7	79.9	—	21.5	12.6	35.5	192.2
December	—	—	14.0	—	3.0	—	4.0	21.0
January	—	—	2.5	—	5.8	—	—	8.3
February	3.3	4.9	19.4	—	17.1	—	16.5	61.2
March	32.2	33.9	48.9	5.8	70.2	—	91.7	282.7
April	19.4	24.4	52.2	—	26.4	—	82.8	205.2
Total	54.9	124.0	229.6	9.1	159.2	19.4	236.0	832.2

NOTE: No aerial detection was utilized during the months of July, August, September, May or June.

Fire Break Service

Firebreak Plowing:

Beginning in 1964, the Forestry Commission was authorized to plow firebreaks for private landowners and to charge for this service on an hourly rate. This rate was amended during the 1971 session of the Legislature and the charge is now \$12.00 per hour for all firebreak plowing equipment. During the fourteen (14) years that this firebreak plowing service has been available to woodland owners of South Carolina, a grand total of 14,626 miles of firebreaks (construction and maintenance) have been plowed. Listed below is a summary by district of firebreak plowing for fiscal year 1978-79.

FIREBREAK SERVICE BY DISTRICT
Fiscal Year 1978-79

<i>District</i>	<i>No. of Properties</i>	<i>No. of Hours Plowed</i>	<i>Approx. Miles Plowed</i>
Camden	51	85	87
Florence	124	228	215
Kingstree	123	219	433
Newberry	19	51	47
Orangeburg	104	207	282
Spartanburg	11	25	20
Walterboro	181	357	415
STATE TOTAL	613	1172	1499

Prescribed Burning Assistance:

A special proviso passed July 1972 provided that the S. C. State Commission of Forestry may, upon request, provide reasonable assistance to private persons in the use of fire purposely set to forest lands for specific and/or prescribed forest management objectives. The charge for this service is fifty (50) cents per acre. This prescribed burning assistance is designed to be compatible with Forestry Commission policies and procedures and also closely parallels requirements set up by the S. C. Pollution Control Authority. Forest fire control mechanized equipment and personnel under this practice are assigned to stand by the immediate area to assist should emergency control of this prescribed burning be required. Hand tools such as backfire torches, fire rakes, and swatters are also made available to the landowner.

Assistance was provided to 39 individual landowners, involving approximately 2,658 acres.

Fire Weather Forecasting:

Beginning in July 1965, regular and special fire weather forecasts have been available to the S. C. State Commission of Forestry and other interested agencies and individuals through the National Weather Service Office, West Columbia.

Throughout the fire season, fire weather forecasts are received daily by the Forestry Commission and transmitted to all districts, counties and forestry interests. Special forecasts are available upon request for areas with large going fires and during periods of extreme fire danger.

Fire Danger Measurements:

Fire danger measurement stations are located in each county to obtain essential local weather information. This information is disseminated to

all fire control personnel for guidance in work planning and fire suppression readiness.

Fourteen of these county weather stations furnish special information to the S. C. Fire Weather Forecasters to assist with general forecasting. Forest Fire Danger is rated on the National Fire Danger Rating System by Class Day ranging from 1 to 5, with 1 being the least dangerous period and 5 the period of greatest fire danger. During the 1978-79 fiscal year, fire danger station averages indicated the following:

Number of Class 1 Days —	217
Number of Class 2 Days —	70
Number of Class 3 Days —	56
Number of Class 4 Days —	18
Number of Class 5 Days —	1

Legal Fires

Legal fires are all forest fires which are previously authorized by the landowner, and started by him or his authorized agent and burn entirely upon his land. Legal fire records show that individual landowners conducted 10,325 fires that burned an estimated 617,614 acres for various purposes during 1978-79.

Legal fire categories and the acreage burned are as follows:

<i>Reason for Burning</i>	<i>Number</i>	<i>Acreage</i>
Hazard Reduction	3,485	291,406
Hunting Preserves	1,062	150,101
Debris Burning	2,491	64,502
Grazing	469	15,578
Miscellaneous	2,818	54,447
Total	10,325	617,614

Rural Community Fire Protection

The Rural Development Act of 1972, Title IV (Public Law 92-419) and as amended by Public Law 95-113, the Food and Agriculture Act of 1977, authorized the Secretary of Agriculture to develop a three-year pilot Rural Community Fire Protection Project. This program applies to rural communities throughout the United States and was established to provide financial and technical assistance for organizing, training, and equipping local fire fighting forces in communities under 10,000 population. Such qualifying fire departments were able to apply for these funds on a 50-50 matching basis. Funds were utilized mostly on equipment such as hose, protective clothing, communications equipment and breathing apparatus.

Funding began in fiscal year 1975 when South Carolina received \$53,000 for distribution and continued in fiscal year 1976 when \$62,840 was made available. Funding for fiscal year 1977 was set at \$50,200. Funding for fiscal year 1979-80 has not yet been appropriated.

Federal Excess Equipment for Rural Fire Departments:

During fiscal year 1976-77 the Forestry Commission began lending excess military equipment to Rural Fire Departments. This equipment, transferred to the Forestry Commission by the U. S. Forest Service, is lent to qualifying Rural Fire Departments for conversion to useful pieces of fire fighting equipment. The department receiving this equipment agrees to paint, maintain, insure and respond to calls by the Forestry Commission. All equipment is returned to the Forestry Commission when no longer needed by the department.

Since January 1976 one hundred seventy-one (171) vehicles and other miscellaneous tanks and spray equipment have been loaned to 130 Rural Fire Departments in 36 counties throughout South Carolina.

Forest Fire Summary

During fiscal year 1978-79 South Carolina wildfire showed a slight rise and acreage burned showed a drop of nearly 7,000 acres over the previous year.

A grand total of 7,804 wildfires burned 27,561.1 acres during the 12-month period of July 1978 through June 1979. This "grand total" includes wildfire losses from both "forest land" and "non-forest lands". The non-forest category refers to lands used for non-forest purposes such as fields, pasture, power line clearings and road right-of-ways, etc.

Forest land fires totaled 7,018 and burned 23,894.6 acres. This is over 9,000 acres below the current average annual burn of 33,304.3 acres. (Calculated from the past 5 years records.)

Forest land fires this year are higher than the previous years (1977-78) 6,836 wildfires, but acreage losses are lower than last year's loss of 30,536 acres.

The 23,894.6 acres of forest land burned this year represents two tenths (.2) of one percent of the 12,050,000 acres of woodland protected by the South Carolina State Commission of Forestry. The average size fire this year is 3.4 acres or 1.6 acres below the five-year average size fire of 5.0 acres.

During this year 11 forest land wildfires occurred that burned over 100 acres. The largest fire burned 200 acres and occurred in Bamberg County.

Non-forest land wildfires recorded this year totalled 787 and burned 3,666.5 acres.

The greatest forest land losses were experienced during the months of March (1,247 fires and 4,650 acres), November (1,213 fires and 4,865 acres), and October (938 fires and 2,094 acres), and April (927 fires and 3,799 acres).

Counties recording the greatest forest land losses during the year were Berkeley County with 639 wildfires and 2,418 acres burned; Williamsburg County with 601 wildfires and 2,483 acres burned; Jasper County with 329 wildfires and 1,665 acres burned.

Counties that experienced only very light losses were Pickens County with 31 wildfires and 26 acres burned; Saluda County with 12 wildfires and 32 acres burned; Chester County with 17 wildfires and 43 acres burned; and York County with 37 wildfires and 51 acres burned.

During 1978-79 a total of 3,487 fires were discovered by fire towers and relayed to forest fire control personnel for suppression action. Landowners and cooperating citizens also responded by calling in 4,398 fires to the Forestry Commission.

Forestry Commission personnel also checked out 4,521 false alarms during 1978-79. A "false alarm" is a check on a suspected forest fire that ultimately does not require any fire suppression action. This includes legal prescribed burnings and legal field fires.

The leading causes of forest land fires in order of importance were: incendiary with 2,698 fires; debris burning with 1,940 fires; and smoking with 1,025 fires.

Precipitation in South Carolina during 1978-79 averaged 57.48 inches as recorded at the 46 fire danger measurement stations located within the state. This precipitation is 9.16 inches above the state's annual average of 48.32 inches and 0.95 inches below the five-year average precipitation of 58.43 inches. (The annual average precipitation is compiled by the National Weather Service and is calculated using the 1941-1970 precipitation records.)

Average precipitation was recorded as follows:

<i>Month</i>	<i>Amount Rainfall</i>	<i>Departure from Normal</i>
	<i>(Inches)</i>	<i>(Inches)</i>
July 1978	5.45	-0.45
August 1978	6.12	+0.94
September 1978	2.79	-1.58
October 1978	0.95	-1.93
November 1978	3.21	+0.56
December 1978	3.51	+0.02
January 1979	6.15	+2.62

February 1979	6.88	+3.10
March 1979	4.30	-0.54
April 1979	6.36	+2.80
May 1979	6.81	+3.26
June 1979	<u>4.95</u>	<u>+0.36</u>
Total	57.48	+9.16

A five year summary of precipitation by fiscal year is shown below:

Year	Amount Rainfall (Inches)	Departure from Average (Inches)
1974-75	62.10	+13.78
1975-76	62.23	+13.91
1976-77	55.13	+ 6.81
1977-78	55.11	+ 6.79
1978-79	<u>57.48</u>	<u>+ 9.16</u>
Average	58.41	+10.09

FOREST LAND FIRES AND ACREAGE BURNED IN SOUTH CAROLINA

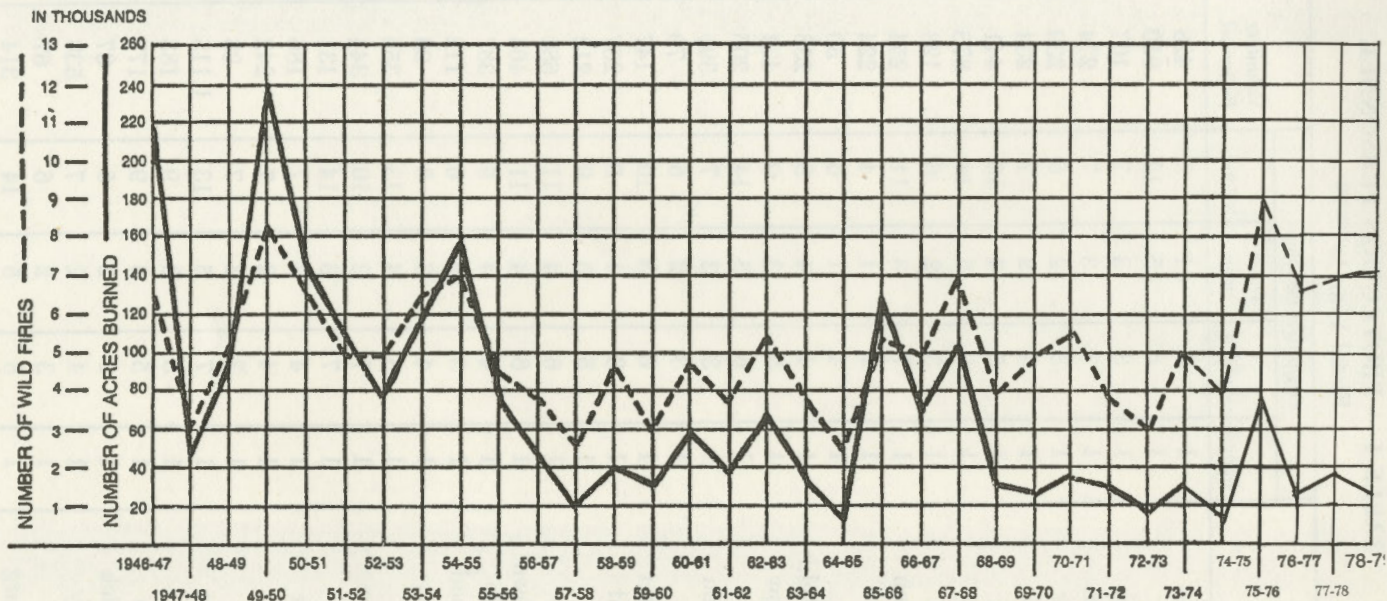


TABLE 1 — PROTECTION PERSONNEL
Fiscal Year 1978-79

	<i>Organized Personnel</i>				<i>Volunteer Personnel</i>	<i>Grand Total</i>
	<i>Ranger</i>	<i>Warden</i>	<i>Tower-men</i>	<i>Total</i>		
Abbeville	1	3	1	5	428	433
Aiken	1	6	5	12	810	822
Allendale	1	3	3	7	107	114
Anderson	1	3	3	7	274	281
Bamberg	1	3	2	6	239	245
Barnwell	1	4	2	7	234	241
Beaufort	1	5	4	10	441	451
Berkeley	1	8	5	14	876	890
Calhoun	1	3	2	6	128	134
Charleston	1	7	3	11	254	265
Cherokee	1	2	1	4	224	228
Chester	1	4	1	6	50	56
Chesterfield	1	4	4	9	238	247
Clarendon	1	5	3	9	434	443
Colleton	1	8	5	14	206	220
Darlington	1	3	3	7	396	403
Dillon	1	3	2	6	79	85
Dorchester	1	6	3	10	147	157
Edgefield	1	3	1	5	267	272
Fairfield	1	5	3	9	213	222
Florence	1	6	4	11	680	691
Georgetown	1	6	4	11	404	415
Greenville	1	4	4	9	387	396
Greenwood	1	3	2	6	112	118
Hampton	1	4	3	8	98	106
Horry	1	8	4	13	355	368
Jasper	1	7	2	10	344	354
Kershaw	1	7	6	14	131	145
Lancaster	1	4	2	7	186	193
Laurens	1	4	2	7	242	249
Lee	1	3	3	7	98	105
Lexington	1	7	5	13	1,115	1,128
Marion	1	5	3	9	183	192
Marlboro	1	5	3	9	177	186
McCormick	1	2	2	5	67	72
Newberry	1	4	2	7	538	545
Oconee	1	3	2	6	67	73
Orangeburg	1	8	5	14	314	328

	<i>Organized Personnel</i>				<i>Volunteer Personnel</i>	<i>Grand Total</i>
	<i>Ranger</i>	<i>Warden</i>	<i>Tower-men</i>	<i>Total</i>		
Pickens	1	4	5	10	101	111
Richland	1	7	4	12	533	545
Saluda	1	3	1	5	8	13
Spartanburg	1	4	4	9	183	192
Sumter	1	5	3	9	506	515
Union	1	3	1	5	68	73
Williamsburg	1	8	4	13	681	694
York	1	4	4	9	93	102
TOTALS	46	216	140	402	13,716	14,118

TABLE 2— SUMMARY OF FOREST LAND FIRES BY MONTHS
July 1, 1978 — June 30, 1979

<i>Month</i>	<i>No. of Fires</i>	<i>Percent of Total Number</i>	<i>Area Burned (Acres)</i>	<i>Average Area Per Fire (Acres)</i>
July	246	3.50	711.9	2.9
August	95	1.35	235.8	2.5
September	163	2.32	477.6	2.9
October	938	13.36	2,094.0	2.1
November	1,213	17.28	4,865.1	4.0
December	676	9.63	2,200.1	3.2
January	523	7.45	1,306.0	2.5
February	735	10.47	2,938.7	4.0
March	1,247	17.76	4,650.0	3.7
April	927	13.20	3,799.5	4.1
May	146	2.08	384.9	2.6
June	109	1.60	231.0	2.1
TOTALS	7,018	100.00	23,894.6	3.4

TABLE 3 — FOREST LAND FIRES BY CAUSE — FISCAL YEAR 1978-79

County	Lightning No. Acres		Campfire No. Acres		Smoking No. Acres		Debris Burning No. Acres		Incendiary* No. Acres		Equipment Use No. Acres		Railroad No. Acres		Children No. Acres		Miscellaneous No. Acres		Total No. Acres	
Abbeville	1	4.5	2	2.6	9	10.2	7	10.4	—	—	4	1.6	17	20.3	1	0.2	1	2.4	42	52.2
Aiken	13	132.5	3	4.3	54	82.0	40	65.6	54	66.2	18	43.6	6	58.5	53	47.3	17	51.0	258	551.0
Allendale	2	42.0	—	—	12	43.5	23	101.0	17	67.7	6	28.5	13	9.8	1	1.6	2	8.2	76	302.3
Anderson	—	—	1	0.4	17	26.5	10	14.8	15	52.5	2	1.2	—	—	6	5.1	1	3.0	52	103.5
Bamberg	1	0.1	—	—	14	18.0	31	114.4	21	407.1	5	2.1	9	3.4	13	8.7	7	6.7	101	560.5
Barnwell	3	4.3	—	—	20	57.3	16	48.7	10	9.5	9	18.4	2	10.1	5	2.8	3	3.8	68	154.9
Beaufort	1	0.2	—	—	21	77.1	63	219.0	60	217.8	2	2.8	2	11.0	12	32.3	1	4.0	162	564.2
Berkeley	—	—	1	1.0	50	121.1	194	653.5	356	1,565.0	10	35.5	9	12.4	18	28.9	1	1.0	639	2,418.4
Calhoun	1	0.4	—	—	11	24.7	12	26.5	1	0.1	2	5.1	3	0.5	4	1.5	6	8.3	40	67.1
Charleston	—	—	1	0.5	16	9.9	79	227.2	64	405.8	1	2.0	1	0.1	15	36.8	—	—	177	682.3
Cherokee	—	—	1	0.4	5	6.0	9	11.2	27	78.6	4	9.4	—	—	4	4.8	—	—	50	110.4
Chester	—	—	—	—	10	31.0	1	2.0	—	—	—	—	6	10.4	—	—	—	—	17	43.3
Chesterfield	4	12.0	1	0.2	20	30.7	34	49.6	13	62.9	3	2.4	23	37.4	6	4.2	8	32.6	112	232.0
Clarendon	—	—	—	—	67	166.5	121	299.2	118	917.0	10	8.9	1	0.2	11	25.2	6	47.1	334	1,464.1
Colleton	—	—	1	2.0	20	30.4	79	344.6	201	968.9	8	10.8	3	16.0	7	7.9	5	28.3	324	1,408.9
Darlington	1	43.0	—	—	18	25.9	64	186.9	25	139.9	9	13.4	3	1.5	21	32.8	10	46.6	151	490.0
Dillon	—	—	1	0.4	38	55.2	29	57.4	15	52.0	2	0.2	3	0.5	10	12.7	2	3.0	100	181.4
Dorchester	—	—	—	—	10	21.5	46	174.2	96	513.4	—	—	—	—	8	25.9	4	2.3	164	737.3
Edgefield	2	18.3	—	—	16	65.3	12	19.4	1	0.3	—	—	—	—	5	11.5	5	10.4	41	125.2
Fairfield	3	2.2	—	—	28	55.1	9	15.7	1	0.6	3	17.7	1	0.1	5	12.4	9	5.4	59	109.2
Florence	—	—	—	—	50	85.0	95	266.2	163	706.8	5	4.3	5	8.6	18	19.6	8	10.5	344	1,103.0
Georgetown	1	0.1	4	1.3	56	116.1	86	415.9	98	671.1	14	26.1	8	11.2	21	24.3	6	11.6	294	1,277.7
Greenville	—	—	2	5.0	19	32.1	13	16.6	9	14.6	1	0.6	1	2.5	6	17.0	11	24.9	62	113.3
Greenwood	1	8.0	1	0.1	18	50.4	16	27.7	2	0.3	9	11.3	16	88.4	13	9.9	7	7.8	83	203.9
Hampton	1	4.0	—	—	20	52.7	62	257.3	202	718.4	5	23.6	15	19.8	1	0.1	1	3.0	105	562.6
Horry	—	—	2	0.3	16	30.0	99	257.3	172	943.6	18	20.1	1	1.0	16	14.2	20	27.3	374	1,068.6
Jasper	5	69.6	3	4.5	18	42.2	92	476.7	172	943.6	5	8.1	4	46.5	25	57.6	5	16.1	329	1,664.9
Kershaw	5	5.3	1	0.2	23	142.1	11	18.4	14	37.9	5	56.6	13	11.8	8	4.6	8	29.8	88	308.7
Lancaster	—	—	1	0.2	22	64.7	16	30.1	1	0.2	1	1.0	1	3.0	3	3.7	4	15.9	49	118.8
Laurens	4	9.6	—	—	31	48.6	6	6.0	—	—	2	1.2	18	35.2	9	1.7	6	8.4	70	110.7
Lee	—	—	—	—	27	54.9	13	19.1	29	98.7	2	0.3	2	0.3	5	7.2	5	7.1	51	81.3
Lexington	2	0.9	12	14.7	42	67.9	49	88.6	40	23.8	18	28.5	7	8.0	35	63.1	8	3.9	213	239.4
Marion	—	—	—	—	7	23.2	28	27.9	19	40.7	5	4.7	1	15.0	3	1.3	3	2.8	66	115.7
Marlboro	—	—	1	0.4	25	24.4	25	58.2	39	200.6	3	27.2	7	6.6	13	8.2	7	17.5	120	343.1
McCormick	—	—	—	—	13	34.8	8	4.5	—	—	3	5.3	2	12.5	5	2.3	1	1.2	33	80.6
Newberry	1	2.8	2	0.2	16	41.8	19	28.4	34	37.2	6	11.3	2	3.2	5	1.3	1	1.5	86	127.7
Oconee	—	—	1	1.0	3	8.2	4	1.3	3	13.6	—	—	2	15.6	1	8.0	3	31.0	18	79.1
Orangeburg	1	2.0	3	11.0	63	199.7	160	517.0	133	642.1	1	0.2	5	12.1	35	53.8	8	17.4	409	1,455.3
Pickens	—	—	1	1.5	4	6.3	9	6.7	2	1.5	2	3.0	2	1.5	7	31.3	4	5.7	31	29.5
Richland	—	—	1	1.0	55	98.7	55	83.4	80	434.4	11	26.8	9	28.9	57	105.7	10	12.3	278	791.2
Saluda	—	—	—	—	5	23.0	3	2.6	—	—	1	1.0	—	—	3	5.4	—	—	12	32.0
Spartanburg	—	—	1	4.0	19	49.5	6	20.0	1	5.0	—	—	13	60.0	5	7.0	—	—	45	145.5
Sumter	—	—	3	8.5	12	24.3	52	197.4	97	394.1	10	21.1	5	19.2	11	25.6	12	22.5	202	712.7
Union	1	40.0	1	1.0	7	14.0	7	34.0	—	—	2	2.0	1	1.0	2	1.5	—	—	21	93.5
Williamsburg	—	—	2	0.4	10	5.2	160	565.7	396	1,824.0	18	67.3	5	10.4	5	4.2	5	5.9	601	2,483.1
York	—	—	2	2.0	8	8.0	8	3.3	7	31.4	4	3.4	2	0.2	5	1.8	1	0.4	37	50.5
STATE TOTAL	54	401.8	56	69.1	1,025	2,253.0	1,940	5,867.0	2,698	12,826.9	247	558.3	250	614.9	516	755.0	232	548.6	7,018	23,894.6

*Incendiary Fire — A fire willfully set by anyone to burn vegetation or property not owned or controlled by him and without consent of the owner or his agent.

TABLE 4 — FOREST LAND FIRES BY CLASS — FISCAL YEAR 1978-79

County	Class A		Class B		Class C		Class D		Class E		Class F		Class G		Total	
	No.	Acres	No.	Acres	No.	Acres	No.	Acres	No.	Acres	No.	Acres	No.	Acres	No.	Acres
Abbeville	4	0.5	38	51.7	—	—	—	—	—	—	—	—	—	—	42	52.2
Aiken	78	11.0	170	313.0	10	227.0	—	—	—	—	—	—	—	—	258	551.0
Allendale	19	2.7	47	114.6	10	185.0	—	—	—	—	—	—	—	—	76	302.3
Anderson	4	0.4	46	72.1	2	31.0	—	—	—	—	—	—	—	—	52	103.5
Bamberg	25	3.8	69	96.7	6	270.0	1	200.0	—	—	—	—	—	—	101	560.5
Barnwell	15	2.5	49	110.4	4	42.0	—	—	—	—	—	—	—	—	68	154.9
Beaufort	29	4.3	117	263.9	16	296.0	—	—	—	—	—	—	—	—	162	564.2
Berkeley	83	9.1	495	1,218.3	60	1,079.0	1	112.0	—	—	—	—	—	—	639	2,418.4
Calhoun	15	1.8	24	53.3	1	12.0	—	—	—	—	—	—	—	—	40	67.1
Charleston	26	4.2	133	376.1	18	302.0	—	—	—	—	—	—	—	—	177	682.3
Cherokee	3	0.6	45	84.8	2	25.0	—	—	—	—	—	—	—	—	50	110.4
Chester	1	0.2	15	31.1	1	12.0	—	—	—	—	—	—	—	—	17	43.3
Chesterfield	35	5.3	70	106.0	7	120.7	—	—	—	—	—	—	—	—	112	232.0
Clarendon	82	10.8	207	556.3	44	765.0	1	132.0	—	—	—	—	—	—	334	1,464.1
Colleton	68	10.4	220	630.5	36	768.0	—	—	—	—	—	—	—	—	324	1,408.9
Darlington	45	7.9	92	187.1	14	295.0	—	—	—	—	—	—	—	—	151	490.0
Dillon	46	5.9	52	120.5	2	55.0	—	—	—	—	—	—	—	—	100	181.4
Dorchester	6	1.0	134	290.3	24	446.0	—	—	—	—	—	—	—	—	164	737.3
Edgefield	7	1.0	31	73.2	3	51.0	—	—	—	—	—	—	—	—	41	125.2
Fairfield	20	2.5	36	59.7	3	47.0	—	—	—	—	—	—	—	—	59	109.2
Florence	60	8.5	257	667.5	27	427.0	—	—	—	—	—	—	—	—	344	1,103.0
Georgetown	106	13.7	161	322.0	25	642.0	2	300.0	—	—	—	—	—	—	294	1,277.7
Greenville	22	2.8	38	85.5	2	25.0	—	—	—	—	—	—	—	—	62	113.3
Greenwood	31	4.1	47	81.8	5	118.0	—	—	—	—	—	—	—	—	83	203.9
Hampton	20	2.6	68	164.0	17	396.0	—	—	—	—	—	—	—	—	105	562.6
Horry	109	16.0	240	437.6	23	406.0	2	209.0	—	—	—	—	—	—	374	1,068.6
Jasper	48	6.7	236	605.2	45	1,053.0	—	—	—	—	—	—	—	—	329	1,664.9
Kershaw	21	3.2	59	120.5	8	183.0	—	—	—	—	—	—	—	—	88	306.7
Lancaster	16	2.2	30	80.8	3	35.8	—	—	—	—	—	—	—	—	49	118.8
Laurens	16	2.2	53	95.5	1	13.0	—	—	—	—	—	—	—	—	70	110.7
Lee	11	1.3	66	137.0	4	49.0	—	—	—	—	—	—	—	—	81	187.3
Lexington	77	10.1	132	228.3	4	61.0	—	—	—	—	—	—	—	—	213	299.4
Marion	28	3.4	34	57.3	4	55.0	—	—	—	—	—	—	—	—	66	115.7
Marlboro	42	5.8	70	138.3	8	199.0	—	—	—	—	—	—	—	—	120	343.1
McCormick	15	1.7	16	35.9	2	23.0	—	—	—	—	—	—	—	—	33	60.6
Newberry	28	3.9	57	108.8	1	15.0	—	—	—	—	—	—	—	—	86	127.7
Oconee	1	0.1	13	22.0	4	57.0	—	—	—	—	—	—	—	—	18	79.1
Orangeburg	53	7.7	336	805.6	18	310.0	2	332.0	—	—	—	—	—	—	409	1,455.3
Pickens	5	0.8	26	28.7	—	—	—	—	—	—	—	—	—	—	31	29.5
Richland	60	9.2	205	440.0	12	167.0	1	175.0	—	—	—	—	—	—	278	791.2
Saluda	—	—	11	22.0	1	10.0	—	—	—	—	—	—	—	—	12	32.0
Spartanburg	—	—	44	133.5	1	12.0	—	—	—	—	—	—	—	—	45	145.5
Sumter	26	3.4	154	365.8	22	343.5	—	—	—	—	—	—	—	—	202	712.7
Union	—	—	18	28.5	3	65.0	—	—	—	—	—	—	—	—	21	93.5
Williamsburg	199	25.2	334	898.9	67	1,446.0	1	113.0	—	—	—	—	—	—	601	2,483.1
York	14	2.3	21	24.2	2	24.0	—	—	—	—	—	—	—	—	37	50.5
TOTAL	1,619	222.8	4,816	10,934.8	572	11,164.0	11	1,573.0	—	—	—	—	—	—	7,018	23,894.6

TABLE 5 — FOREST LAND FIRES BY COUNTIES AND MONTHS — FISCAL YEAR 1978-79

County	July 1978		August 1978		September 1978		October 1978		November 1978		December 1978		January 1979		February 1979		March 1979		April 1979		May 1979		June 1979		Total Fiscal Year	
	No.	Acres	No.	Acres	No.	Acres	No.	Acres	No.	Acres	No.	Acres	No.	Acres	No.	Acres	No.	Acres	No.	Acres	No.	Acres	No.	Acres	No.	Acres
Abbeville	1	0.6	5	6.7	2	1.2	12	14.1	4	4.2	1	0.3	1	1.6	6	11.2	5	7.2	1	1.6	3	3.1	1	0.4	42	52.2
Aiken	22	133.9	8	23.5	8	5.4	50	96.4	24	39.1	16	25.4	14	16.2	26	85.6	32	54.7	38	49.8	7	8.7	13	12.3	258	551.0
Allendale	7	35.5	2	3.0	3	43.0	9	17.9	12	43.5	3	14.0	1	1.0	8	12.7	20	87.0	6	38.7	3	3.5	2	2.5	76	302.3
Anderson	7	7.0	2	3.5	2	0.2	1	1.0	6	5.9	6	4.3	4	8.4	3	5.6	15	57.1	6	10.5	—	—	—	—	52	103.5
Bamberg	6	1.8	2	0.5	4	0.8	17	92.1	19	24.9	5	204.1	5	11.3	5	2.1	18	23.8	17	194.4	1	2.4	2	2.3	101	560.5
Barnwell	4	3.1	—	—	1	4.3	5	7.0	9	15.6	9	13.3	5	7.0	8	13.4	17	70.6	8	20.2	1	0.2	1	0.2	68	154.9
Beaufort	2	0.4	2	1.7	—	—	4	3.1	22	46.5	26	66.8	9	15.2	20	93.3	48	175.3	26	157.8	2	4.0	1	0.1	162	564.2
Berkeley	6	4.2	6	6.1	7	34.5	74	138.0	138	739.8	88	361.2	62	197.7	75	323.5	105	287.8	73	286.8	3	32.0	2	7.0	639	2418.4
Calhoun	—	—	1	0.4	1	0.5	9	3.4	5	14.4	7	1.7	—	—	7	28.5	6	8.7	3	7.1	1	2.4	—	—	40	67.1
Charleston	2	11.4	3	7.2	2	8.0	15	31.1	21	50.7	11	20.0	14	47.5	33	137.2	41	223.0	31	122.3	1	15.0	3	8.9	177	682.3
Cherokee	2	2.2	—	—	—	—	18	38.2	13	21.0	—	—	3	10.0	—	—	9	26.4	5	12.6	—	—	—	—	50	110.4
Chester	—	—	—	—	—	—	3	2.6	2	4.4	2	13.2	—	—	—	—	4	11.1	3	7.0	—	—	3	5.0	17	43.3
Chesterfield	13	35.5	3	15.2	2	0.5	16	8.3	7	56.7	8	3.9	5	2.0	5	3.3	29	49.4	20	53.5	—	—	4	3.7	112	232.0
Clarendon	4	4.1	1	28.0	7	7.0	54	108.0	89	544.2	33	146.7	24	42.2	35	194.6	42	148.5	39	223.8	4	13.0	2	4.0	334	1464.1
Colleton	5	10.5	2	0.4	3	11.2	53	91.9	76	459.8	40	91.7	27	54.3	27	251.7	35	299.6	47	124.6	6	5.7	3	7.5	324	1408.9
Darlington	3	3.1	2	43.2	3	5.9	34	140.3	34	73.9	10	32.8	6	8.7	10	17.6	26	72.9	14	29.5	4	46.9	5	15.2	152	490.0
Dillon	2	5.2	3	2.0	3	5.1	17	21.7	2	0.3	9	7.7	8	5.8	9	15.5	20	70.5	10	25.3	6	6.6	11	15.7	100	181.4
Dorchester	4	6.1	—	—	—	—	15	28.4	33	83.3	17	58.3	14	95.1	22	82.3	32	166.0	27	217.8	—	—	—	—	164	737.3
Edgefield	4	23.4	1	2.0	3	18.5	3	2.7	9	20.9	1	0.6	2	4.9	2	4.4	6	28.0	4	13.0	3	3.5	3	3.3	41	125.2
Fairfield	7	4.9	1	0.6	3	1.1	9	27.1	5	7.1	4	2.0	6	26.6	2	1.6	8	19.2	12	10.4	2	8.6	—	—	59	109.2
Florence	2	0.6	1	8.0	7	8.2	46	92.5	83	265.9	54	145.4	30	87.3	27	143.8	49	167.0	40	167.9	2	1.0	3	12.3	344	1103.0
Georgetown	6	47.7	4	4.5	7	11.8	27	233.1	32	179.7	26	22.9	27	104.6	28	121.9	76	256.0	46	227.2	9	22.1	6	46.2	294	1277.7
Greenville	—	—	—	—	—	—	13	33.8	11	11.9	3	6.3	3	13.4	4	5.2	16	19.7	12	23.0	—	—	—	—	62	113.3
Greenwood	5	13.3	1	1.5	3	25.3	14	11.5	18	23.5	7	1.4	3	0.3	7	32.7	14	82.8	5	3.6	5	7.8	1	0.2	83	203.9
Hampton	4	26.5	8	33.5	2	5.5	3	10.2	16	106.6	12	69.6	7	7.3	9	53.0	28	220.9	8	23.2	7	5.3	1	1.0	105	562.6
Horry	—	—	6	5.2	7	6.0	50	81.8	90	444.1	31	78.4	17	23.4	51	103.8	53	135.2	50	156.8	12	32.9	7	1.0	374	1068.6
Jasper	16	83.3	2	6.0	—	—	17	77.1	35	82.5	19	63.5	46	147.9	53	243.4	101	673.6	34	274.9	4	10.2	2	2.5	329	1664.9
Kershaw	9	13.9	3	2.4	4	5.6	9	10.8	5	3.5	6	43.8	5	12.9	12	77.9	14	40.9	15	36.8	4	21.0	2	37.2	88	306.7
Lancaster	4	6.4	—	—	3	3.6	10	9.4	1	0.1	8	16.2	5	3.9	3	17.4	10	49.5	3	9.1	1	3.0	1	0.2	49	118.8
Laurens	18	35.0	1	0.6	2	13.2	10	10.3	9	9.8	2	1.6	5	10.5	3	5.3	9	9.3	11	15.1	—	—	—	—	70	110.7
Lee	1	6.0	2	0.3	2	1.6	16	27.7	14	55.5	12	33.6	6	19.0	7	11.6	10	18.3	5	4.1	2	4.5	4	5.1	81	187.3
Lexington	20	19.7	3	0.9	4	9.9	15	11.7	19	18.5	27	23.3	18	21.0	16	73.8	62	79.8	24	37.3	4	3.3	1	0.2	213	299.4
Marion	1	0.1	—	—	1	1.0	9	18.5	9	10.2	7	30.6	2	2.1	4	8.5	11	19.3	10	7.6	9	15.7	3	2.1	66	115.7
Marlboro	3	4.5	3	0.3	2	3.1	9	31.1	9	13.0	5	1.5	14	17.6	16	40.3	33	113.0	20	113.0	2	1.8	4	3.9	129	343.1
McCormick	1	0.3	—	—	2	0.3	5	15.6	7	33.8	3	2.3	2	0.6	3	3.5	4	2.1	2	1.6	3	0.4	1	0.1	33	60.6
Newberry	6	13.1	2	0.7	14	14.1	39	76.6	3	2.2	4	0.7	3	3.4	4	3.5	8	12.4	2	0.9	—	—	1	0.1	86	127.7
Oconee	1	1.0	—	—	—	—	1	0.5	1	10.0	1	10.0	1	0.1	1	4.2	4	11.6	4	27.7	4	23.0	—	—	18	79.1
Orangeburg	8	14.0	4	8.0	6	18.7	43	87.5	84	238.4	36	119.4	28	61.3	52	136.9	68	223.3	73	540.8	4	4.1	3	2.9	409	1455.3
Pickens	3	1.2	—	—	1	2.0	3	4.6	1	1.0	1	0.2	1	1.0	—	—	10	9.7	10	9.3	1	0.5	—	—	31	29.5
Richland	21	47.2	3	6.2	11	7.0	50	87.0	38	156.3	26	62.5	18	29.3	29	85.6	39	234.3	32	67.1	6	2.9	5	5.8	278	791.2
Saluda	—	—	—	—	1	10.0	3	6.0	2	2.6	2	7.0	3	5.4	—	—	1	1.0	—	—	—	—	—	—	12	32.0
Spartanburg	2	7.0	—	—	3	9.0	3	8.0	14	61.0	—	—	1	4.0	—	—	8	22.5	11	24.0	1	6.0	2	4.0	45	145.5
Sumter	8	33.5	—	—	6	10.6	32	40.9	58	188.7	11	55.3	19	53.5	19	127.3	24	96.9	22	99.0	3	7.0	—	—	202	712.7
Union	3	43.5	1	1.0	—	—	1	1.0	6	23.0	1	1.0	1	0.5	1	1.0	4	6.5	2	6.0	—	—	1	10.0	21	93.5
Williamsburg	—	—	7	12.7	21	163.9	86	214.9	113	651.5	76	344.6	48	120.2	81	352.5	65	247.0	96	312.5	14	55.7	4	7.6	601	2488.1
York	3	1.2	—	—	—	—	6	15.6	5	15.6	—	—	—	—	2	1.5	8	10.7	10	4.3	2	1.1	1	0.5	37	50.5
Total	246	711.9	95	235.8	163	477.6	938	2,094.0	1,213	4,865.1	676	2,200.1	523	1,306.0	735	2,938.7	1,247	4,650.0	927	3,799.5	146	384.9	109	231.0	7,018	23,894.6

**TABLE 6 — CLASSIFICATION BY CAUSES
FOREST LAND FIRES
FISCAL YEAR 1978-79**

<i>Causes</i>	<i>Number of Fires</i>	<i>Percent of Total Number</i>	<i>Area Burned (Acres)</i>	<i>Average Area Per Fire (Acres)</i>
Lightning	54	0.8	401.8	7.4
Campfire	56	0.8	69.1	1.2
Smoking	1,025	14.6	2,253.0	2.2
Debris Burning	1,940	27.6	5,867.0	3.0
Incendiary	2,698	38.4	12,826.9	4.8
Equipment Use	247	3.5	558.3	2.3
Railroad	250	3.6	614.9	2.5
Children	516	7.4	755.0	1.5
Miscellaneous	232	3.3	548.6	3.4
TOTALS	7,018	100.0	23,894.6	3.4

**TABLE 7 — CAUSES OF FIRES — FIVE YEAR PERIOD
(Forest Land)
(Percent of Total)**

<i>Causes</i>	<i>1974-75</i>	<i>1975-76</i>	<i>1976-77</i>	<i>1977-78</i>	<i>1978-79</i>
Lightning	0.9	0.3	1.3	1.8	0.7
Campfire	1.3	0.7	0.7	0.6	0.7
Smoking	18.7	12.8	15.9	12.2	14.0
Debris Burning	22.7	22.3	27.0	29.9	29.0
Incendiary	35.4	50.9	37.4	38.8	38.0
Equipment Use	3.8	2.4	3.4	3.0	3.5
Railroad	4.0	2.9	4.4	4.4	3.5
Children	8.1	5.8	6.6	6.2	7.3
Miscellaneous	5.1	1.9	3.3	3.1	3.3

**TABLE 8 — FOREST LAND FIRES REPORTED IN SOUTH
CAROLINA
Fiscal Year 1978-79**

<i>Unit</i>	<i>Area Protected (Acres)</i>	<i>Number of Fires</i>	<i>Area Burned (Acres)</i>	<i>Percent Area Burned</i>	<i>Average Area Per Fire (Acres)</i>
Abbeville	194,361	42	52.2	.03	1.2
Aiken	477,331	258	551.0	.12	2.1
Allendale	190,786	76	302.3	.16	4.0
Anderson	211,031	52	103.5	.05	2.0
Bamberg	154,407	101	560.5	.36	5.5
Barnwell	161,433	68	154.9	.10	2.3
Beaufort	170,505	162	564.2	.33	3.5
Berkeley	404,049	639	2,418.4	.60	3.8
Calhoun	131,757	40	67.1	.05	1.7
Charleston	264,643	177	682.3	.26	3.9
Cherokee	149,092	50	110.4	.04	2.2
Chester	262,651	17	43.3	.02	2.5
Chesterfield	359,570	112	232.0	.06	2.1
Clarendon	225,189	334	1,464.1	.65	4.4
Colleton	500,875	324	1,408.9	.28	4.3
Darlington	177,189	151	590.0	.28	3.2
Dillon	146,786	100	181.4	.12	1.8
Dorchester	282,250	164	737.3	.26	4.5
Edgefield	196,105	41	125.2	.06	3.1
Fairfield	375,414	59	109.2	.03	1.8
Florence	291,549	344	1,103.0	.38	3.2
Georgetown	389,783	294	1,277.7	.33	4.3
Greenville	286,608	62	113.3	.04	1.8
Greenwood	175,510	83	203.9	.12	2.5
Hampton	283,378	105	562.6	.20	5.4
Horry	494,462	374	1,068.6	.21	2.9
Jasper	277,557	329	1,664.9	.60	5.1
Kershaw	419,876	88	306.7	.07	3.5
Lancaster	230,775	49	118.8	.05	2.4
Laurens	276,837	70	110.7	.04	1.6
Lee	117,215	81	187.3	.16	2.3
Lexington	302,394	213	299.4	.09	1.4
Marion	228,579	66	115.7	.05	1.8
Marlboro	174,497	120	343.1	.20	2.9
McCormick	143,541	33	60.6	.04	1.8
Newberry	232,222	86	127.7	.05	1.5
Oconee	233,784	18	79.1	.03	4.4
Orangeburg	377,160	409	1,455.3	.39	3.6
Pickens	217,575	31	29.5	.01	1.0
Richland	311,022	278	791.2	.25	2.8
Saluda	182,185	12	32.0	.02	2.7
Spartanburg	242,131	45	145.5	.06	3.2
Sumter	231,546	202	712.7	.31	3.5
Union	206,601	21	93.5	.05	4.5
Williamsburg	410,339	601	2,483.1	.61	4.1
York	277,440	37	50.5	.02	1.4
TOTALS	12,050,000	7,018	23,894.6	.20	3.4

**TABLE 9 — FIVE YEAR SUMMARY
FOREST FIRE STATISTICS
(Forest Land Only)**

<i>Fiscal Year</i>	<i>Total Area Protected (Acres)</i>	<i>No. of Acres</i>	<i>Area Burned (Acres)</i>	<i>Percent of Area Burned</i>	<i>Average Area Per Fire (Acres)</i>
1974-75	12,050,000	3,943	11,766.6	.10	3.0
1975-76	12,050,000	8,899	75,185.0	.62	8.4
1976-77	12,050,000	6,636	25,138.8	.21	3.8
1977-78	12,050,000	6,836	30,536.4	.25	4.5
1978-79	12,050,000	7,018	23,894.6	.20	3.4
Five Year Average	12,050,000	6,666	33,304.3	.28	5.0

**TABLE 10
STATE SUMMARY
LAW ENFORCEMENT INFORMATION
Fiscal Year 1978-79**

	<i>Camden</i>	<i>Florence</i>	<i>Kingstree</i>	<i>Newberry</i>	<i>Orangeburg</i>	<i>Spartanburg</i>	<i>Walterboro</i>	<i>STATE TOTALS</i>
PART A. NUMBER OF VIOLATIONS								
1. Willful and Malicious	19	22	150	1	6	9	10	217
2. Intentional	262	493	918	38	301	66	718	2,796
3. Careless and Negligent	353	375	845	226	701	200	531	3,231
4. Other Violations	—	—	—	—	14	—	—	14
5. Total Violations (1-4)	634	890	1,913	265	1,022	275	1,259	6,258
6. Notification Violations	5	10	16	7	18	—	54	110
7. Total All Violations (5 & 6)	639	900	1,929	272	1,040	275	1,313	6,368
8. No Fire Law Violations	239	413	75	264	202	98	163	1,464
PART B. NO. OF PROSECUTIONS								
1. Willful and Malicious	—	—	—	—	—	—	—	—
2. Intentional	—	—	—	—	—	—	8	8
3. Careless and Negligent	5	14	13	3	2	3	3	43
4. Notification Law	3	9	15	8	9	—	13	57
5. Other Violations	—	—	—	—	—	—	—	—
6. Total	8	23	28	11	11	3	24	108
PART C. NO. OF CONVICTIONS								
1. Willful and Malicious	—	—	—	—	—	—	—	—
2. Intentional	—	—	—	—	—	—	8	—
3. Careless and Negligent	5	12	12	3	2	3	3	40
4. Notification Law	2	9	16	8	9	—	12	56
5. Other Violations	—	—	—	—	—	—	—	—
6. Total	7	21	28	11	11	3	23	104

TABLE 11
ANNUAL BURNING NOTIFICATION SUMMARY
S. C. State Commission of Forestry
Fiscal Year 1978-79

<i>County</i>	<i>Number Notifications Received</i>	<i>Number Fires Escaped</i>	<i>Number Technical Violations</i>	<i>Number Prosecutions</i>	<i>Number Convictions</i>
Abbeville	1,049	1	5	7	7
Aiken	6,104	15	34	3	3
Allendale	243	12	—	—	—
Anderson	726	—	—	—	—
Bamberg	658	10	—	1	1
Barnwell	1,335	9	6	1	1
Beaufort	3,178	17	—	1	1
Berkeley	2,032	30	13	2	1
Calhoun	878	4	1	—	—
Charleston	1,806	12	—	5	4
Cherokee	349	2	1	—	—
Chester	292	—	—	—	—
Chesterfield	1,653	13	9	—	—
Clarendon	827	16	—	3	3
Colleton	3,328	30	1	3	3
Darlington	382	5	—	—	—
Dillon	1,046	—	—	—	—
Dorchester	868	10	1	—	—
Edgefield	267	—	—	—	—
Fairfield	1,122	9	1	—	—
Florence	1,112	5	—	—	—
Georgetown	1,686	21	—	5	5
Greenville	3,226	—	—	—	—
Greenwood	1,587	1	5	1	1
Hampton	1,597	11	—	1	1
Horry	2,044	5	6	9	9
Jasper	1,436	32	—	3	3
Kershaw	2,284	3	—	—	—
Lancaster	580	11	3	—	—
Laurens	874	2	3	—	—
Lee	588	2	5	3	2
Lexington	5,217	4	4	2	2
Marion	581	2	—	—	—
Marlboro	780	4	—	—	—
McCormick	182	—	—	—	—
Newberry	888	7	—	—	—
Oconee	1,383	—	—	—	—
Orangeburg	1,432	11	—	2	2
Pickens	823	3	—	—	—
Richland	982	3	—	—	—
Saluda	417	—	—	—	—
Spartanburg	637	—	—	—	—
Sumter	2,189	60	—	—	—
Union	57	1	—	—	—
Williamsburg	1,471	25	4	5	5
York	1,362	2	—	—	—
TOTALS	63,548	411	102	57	54

**TABLE 12 — NON-FOREST LAND FIRES BY CAUSES
(BY DISTRICT)
Fiscal Year 1978-79**

Causes	Camden		Florence		Kingstree		Newberry		Orangeburg		Spartanburg		Walterboro		Total	
	No.	Acres	No.	Acres	No.	Acres	No.	Acres	No.	Acres	No.	Acres	No.	Acres	No.	Acres
Lightning	1	2.5	—	—	—	—	—	—	—	1.0	—	—	—	—	1	3.5
Campfire	—	—	—	—	—	—	—	1.1	—	—	—	8.0	—	—	—	9.1
Smoking	11	86.2	54	248.5	17	13.8	20	31.1	18	108.5	24	172.7	24	17.9	168	678.7
Debris Burning	14	142.3	41	173.5	22	259.4	20	69.1	23	164.7	12	54.2	74	338.4	206	1,201.6
Incendiary	19	136.9	13	110.8	85	272.2	1	2.9	14	46.2	9	84.5	60	534.8	201	1,188.3
Equipment Use	3	5.8	11	16.7	3	3.0	5	18.6	4	10.5	1	15.6	2	1.2	29	71.4
Railroad	12	8.8	25	35.3	1	1.9	33	20.7	2	1.2	4	166.5	4	27.6	81	262.0
Children	5	26.3	14	27.0	6	19.4	7	8.1	9	19.0	3	15.4	24	47.7	68	162.9
Miscellaneous	3	32.9	6	2.4	1	0.1	7	24.8	8	7.9	4	9.5	4	11.4	33	89.0
TOTAL	68	441.7	164	614.2	135	569.8	93	176.4	78	359.0	57	526.4	192	979.0	787	3,666.5

TABLE 13 — NON-FOREST LAND FIRES BY CAUSE — FISCAL YEAR 1978-79

County	Lightning		Campfire		Smoking		Debris Burning		Incendiary*		Equipment Use		Railroad		Children		Miscellaneous		Total	
	No.	Acres	No.	Acres	No.	Acres	No.	Acres	No.	Acres	No.	Acres	No.	Acres	No.	Acres	No.	Acres	No.	Acres
Abbeville	—	—	—	—	5	9.1	2	9.2	1	1.0	—	—	8	11.8	—	—	3	7.7	19	38.8
Aiken	—	—	—	—	5	61.6	10	60.7	7	16.6	1	8.5	—	—	6	8.2	5	5.8	34	161.4
Allendale	—	—	—	—	1	0.1	2	2.2	—	—	3	2.0	1	0.1	—	—	—	—	7	4.4
Anderson	—	—	—	—	—	45.4	2	26.5	2	52.3	—	1.8	—	—	1	9.3	1	2.0	6	137.3
Bamberg	—	—	—	—	—	—	—	—	—	—	—	—	—	0.5	—	—	—	—	—	0.5
Barnwell	—	—	—	—	—	—	—	5.2	1	6.0	—	—	—	—	—	—	—	—	1	11.2
Beaufort	—	—	—	—	1	1.2	15	86.7	11	188.9	—	—	—	—	2	2.2	—	—	29	279.0
Berkeley	—	—	—	—	2	1.2	9	62.6	5	117.5	2	1.1	—	—	1	0.1	—	—	19	182.5
Calhoun	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Charleston	—	—	—	—	5	7.6	19	121.2	4	47.3	1	0.2	—	—	2	2.2	1	9.0	32	187.5
Cherokee	—	—	—	—	6	19.0	6	7.0	2	13.0	—	7.0	1	0.6	—	—	—	—	15	46.6
Chester	—	—	—	—	1	4.0	—	1.0	—	—	—	—	—	—	—	—	—	—	1	5.0
Chesterfield	—	—	—	—	2	36.3	4	42.3	—	1.0	2	4.1	1	2.0	2	12.5	—	2.1	11	100.3
Clarendon	—	—	—	—	15	12.6	9	129.1	77	31.7	1	1.9	—	—	5	13.5	1	0.1	108	188.9
Colleton	—	—	—	—	4	3.0	12	35.4	11	91.6	—	—	1	17.0	1	0.2	—	—	29	147.2
Darlington	—	—	—	—	3	1.0	4	64.8	2	1.7	—	—	—	—	1	2.1	—	—	10	69.6
Dillon	—	—	—	—	30	17.3	12	41.2	1	26.8	—	—	16	2.0	9	5.6	—	—	68	92.9
Dorchester	—	—	—	—	4	2.0	1	25.3	—	85.0	—	—	—	—	—	—	1	1.8	6	114.1
Edgefield	—	—	—	—	1	2.0	2	19.5	—	—	—	—	—	—	—	—	—	—	3	21.5
Fairfield	—	—	—	—	2	2.0	5	5.3	—	—	3	2.6	1	0.1	1	0.1	—	0.4	12	10.5
Florence	—	—	—	—	12	35.6	7	16.8	2	40.0	3	3.3	2	28.2	—	4.0	—	—	26	127.9
Georgetown	—	—	—	—	—	—	1	11.5	—	3.0	—	—	—	1.8	—	5.8	—	—	1	22.1
Greenville	—	—	—	1.0	10	54.9	3	16.7	5	3.7	1	2.0	—	2.5	2	6.1	2	7.1	23	94.0
Greenwood	—	—	—	1.1	3	1.7	4	12.0	—	—	—	—	19	7.1	4	2.1	—	2.0	30	26.0
Hampton	—	—	—	—	—	—	9	8.7	8	12.1	—	—	—	—	1	0.1	1	0.2	19	21.1
Horry	—	—	—	—	—	0.6	2	17.6	3	21.3	—	0.6	—	—	—	1.3	—	—	5	41.4
Jasper	—	—	—	—	10	4.1	18	61.1	26	109.9	1	1.0	3	10.6	18	43.0	1	0.4	77	230.1
Kershaw	—	—	—	—	—	—	—	2.0	—	—	—	—	—	—	—	—	—	—	—	2.0
Lancaster	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Laurens	—	—	—	—	6	8.0	3	9.1	—	—	1	10.0	—	1.2	2	4.0	2	14.5	14	46.8
Lee	—	—	—	—	—	20.0	3	9.0	—	—	—	—	—	—	—	—	—	—	3	29.0
Lexington	—	—	—	—	1	0.4	—	10.0	1	3.1	—	—	—	—	1	0.2	—	—	3	13.7
Marion	—	—	—	—	1	86.7	10	25.5	—	15.0	6	11.7	4	4.4	1	5.9	1	0.1	23	149.3
Marlboro	—	—	—	—	8	107.3	6	7.6	5	6.0	2	1.1	3	0.7	3	8.1	5	2.3	32	133.1
McCormick	—	—	—	—	—	—	1	0.6	—	—	—	—	5	0.5	—	1.9	2	0.2	8	3.2
Newberry	—	—	—	—	2	4.3	3	12.4	—	1.9	1	6.0	—	—	—	—	—	—	6	24.6
Oconee	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	0.2	1	0.2
Orangeburg	—	1.0	—	—	11	46.4	11	86.6	5	20.5	—	—	1	0.6	2	10.6	3	2.1	33	167.8
Pickens	—	—	—	—	—	—	—	—	—	3.0	—	4.0	—	1.0	—	—	—	—	—	8.0
Richland	—	—	—	—	3	5.6	3	1.6	6	31.1	1	1.5	7	4.6	3	12.2	1	0.1	24	56.7
Saluda	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Spartanburg	—	—	—	—	5	38.0	—	—	—	—	—	—	3	162.0	—	—	—	—	8	200.0
Sumter	1	2.5	—	—	6	24.3	4	87.4	13	104.8	1	0.2	3	2.2	—	1.6	2	30.7	30	253.7
Union	—	—	—	—	2	4.0	—	1.0	—	—	—	—	—	—	—	—	—	—	2	5.0
Williamsburg	—	—	—	—	—	—	3	56.2	3	120.0	—	—	1	0.1	—	—	—	—	7	176.3
York	—	—	—	7.0	1	11.4	1	3.0	1	12.5	—	0.8	—	0.4	—	—	—	0.2	2	35.3
TOTAL	1	3.5	—	9.1	168	678.6	206	1,201.6	201	1,188.3	30	71.4	80	262.0	68	162.9	33	89.0	787	3,666.5

TRAINING SECTION

The Training Section was organized in January 1979 under the Field Operations Division. The Section is composed of a Staff Forester whose duties are as follows:

1. Direct and coordinate the Commission's training program in all subject areas.
2. Evaluate the training level of the various units of the Commission and in coordination with the various program and staff managers, design adequate training plans to bring each group to the desired level of proficiency.
3. Coordinate with the various private forest interest to assist them to attain proper training in forest fire control techniques.

Standard training programs for new employees in all job areas are being prepared to ensure the individual reaching the standards for the job assigned as soon as practical. Programs for foresters and fire tower operators have been prepared and put in use. Programs for other jobs will be prepared on a regular basis.

An annual training plan is being prepared each year in cooperation with all program managers. This will help to set priorities and to insure that needed training is given on schedule.

A training library including manuals, films, tapes, slides, etc., has been started and will be expanded as items and funds become available.

INFORMATION AND EDUCATION

Introduction

South Carolina's 12.5 million acres of forest land provide an annual return of approximately 1.9 billion dollars in growing, harvesting, manufacturing, transporting and sale of forest products.

The needs of our ever increasing population demand that each forest acre produce the maximum amount of usable wood, protect soil and water supplies, and provide for the recreational needs of the citizens of the state.

Every Forestry Commission employee participates in an education program designed to reach every South Carolinian. Through various means citizens are made aware of their responsibilities to conserve our natural resources so that present and future generations may use and enjoy them to their fullest.

Supporting the state's third largest manufacturing industry, our forests provide a livelihood for thousands of people. Yet the state's woodlands are producing only half of their potential. The aim of the Commission's information and education program is to help the land-

owners and people of the state realize the potential value of our woodland and apply the necessary conservation practices that can double timber production.

The 1968 Forest Survey points to the need for heavy emphasis on improvement of practices on farm and other non-industrial or government-owned woodlands. These lands constitute two-thirds of the commercial forest land of the state but are producing far less than their share of usable wood and wood fiber. Increased production here will serve as the key to the expected demands by the end of this century.

Points stressed in the Commission's information and education efforts in promoting wise land use are:

1. Forest fire protection: Some 7,018 (only 54 caused by lightning) illegal woods fires burned during the year in South Carolina — 99 percent being caused by people!
2. Unwise cutting practices mean low production and inferior forest products.
3. Trees should be planted on some three million acres of idle or unproductive land.
4. Improve the quality of many existing stands of timber throughout the state by removing inferior species and poor quality trees and promoting active interest in a program of superior tree development through genetics.
5. Stress the vital importance of woodlands and good land management practices to the maintenance of good soil, water, and wildlife resources of the state.
6. Develop appreciation in the use, protection, and support of South Carolina's great recreational potential that exists in public and private woodlands to serve the recreational needs of the people of the state.

Forest Fire Prevention

In the Commission's 1929 Annual Report, Lewis E. Staley, then State Forester, said, "While light burning may not kill the larger trees, unquestionably the basis for the future forests — the baby trees — are practically all destroyed. This is an indisputable fact." To this day, it is upon this "indisputable fact," that even little fires kill little trees, that the primary approach of the Commission to forest fire prevention is based. Through a program beginning with personal contacts, the need for preventing wildfires is brought to the attention of every man, woman, and child in the state. Forestry Commission personnel also utilize other media of communication such as posters, pocket and wall calendars, roadside signs, exhibits, publications, illustrated talks, newspaper articles and radio and television programs to bring the conservation message to each citizen of the state. During the year some 1,982 pro-

grams of various kinds were presented by Commission personnel to over 86,643 people of all ages. The number of television and radio programs is included; however, the number of viewers or listeners cannot be determined.

During the year, considerable work has been done in problem areas of the coastal plains in helping district and county personnel formulate an intensified educational program and fire prevention plan based on a thorough investigation into causes, attitudes, and habits of local people. Persistent follow-up helps assure that details of plans laid are carried out and that every possible prevention tool is used effectively to bring the occurrence of wildfire and the subsequent loss of valuable woodland down to an acceptable level.

Cooperative Forest Fire Prevention Campaign

The Cooperative Forest Fire Prevention Campaign supplements local materials and programs with those produced in cooperation with the federal government and other states. It reinforces local efforts to reach, in one way or another, every man, woman, and child within the state. This national program, featuring Smokey Bear, is guided by the advertising Council, Inc., in cooperation with the State Foresters and the U. S. Forest Service. The program is backed by American business as a public service campaign. The advertising agency, Foote, Cone and Belding, of Los Angeles, California volunteers time and services to prepare materials to make the Cooperative Forest Fire Prevention Campaign one of the nation's most outstanding public service campaigns. Smokey Bear's campaign in South Carolina utilizes a wide variety of materials including posters, booklets, bookmarks, newspaper ads, radio platters, TV films, and other material to bring forest fire prevention information and reminders to people of all ages.

A number of products licensed to use the Smokey Bear symbol, and carrying a forest fire prevention message, provide additional ways of reaching people with fire prevention reminders. Among the items produced under license are Smokey Bear ashtrays, wallets, moccasins, T-shirts, scarfs, fishing tackle, archery sets, cigarette snuffers, belts, figurines, salt and pepper shakers, handkerchiefs, coloring books, comic books, calendars, candies and cookies, charcoal picnic grills, hats, dungarees, jigsaw puzzles, Smokey Bear Dolls, place mats, and other items.

Southern Cooperative Forest Fire Prevention Campaign

Recognizing the need for a more southern slant than the national campaign can provide, the states and the U. S. Forest Service in the South have continued to cooperate in the production of forest fire

prevention materials with a southern flavor. The eighteenth year's operation of the southern program saw continued production of recorded radio spots, a series of TV spots, and news ads which are currently being distributed. The southern materials supplement the national materials to intensify and strengthen forest fire prevention efforts in South Carolina.

Fire Prevention Roadside Signs

Fire prevention roadside signs have been seen along South Carolina highways since 1953. The continuing program uses a series of three signs which first shows a cigarette being crushed out in an ashtray with the word CRUSH, second a campfire being drowned out with the word DROWN, and finally Smokey Bear saying "THANKS."

The Commission purchases additional signs each year to replace worn out and damaged signs so thousands of motorists will continue to see these forest fire prevention reminders.

In addition, several seven-foot Scotchlite Smokey Bear signs have been erected in state parks, campgrounds and other appropriate spots. A very attractive smaller roadside type fiberglass sign in "caution yellow" with Smokey's portrait and a forest fire prevention message is also being used in campgrounds and roadside parks.

A new sign, S. C. LAW — NOTIFY FIRETOWER BEFORE BURNING BRUSH, which includes the telephone number to call is now being posted on many rural roads.

School Program

School children throughout the state receive basic information on forestry and forest fire prevention from Forestry Commission foresters, rangers and wardens. Some 723 programs were held in the elementary grades, where schoolyard demonstrations of fire control equipment and suppression techniques, flip charts and color slides were used to help bring the conservation story to the classroom. 39,277 school children were given basic information about the conservation of our forest resources. This includes Arbor Day demonstrations and slide programs which were held in vocational agriculture classes in each county.

In addition to the slide programs and demonstrations, third grade children throughout the state received copies of the booklet "Smokey Bear's Story of the Forest" and copies of a Smokey Bear coloring sheet. An equal number of first grade students received Smokey Bear coloring sheets with forest fire prevention and conservation messages. Second grade students received a 12-inch ruler which carries the metric scale as well. Fourth graders received a schoolyard or classroom demonstration of basic forest fire suppression methods and tools and a booklet "The

Junior Forest Ranger Handbook." Fifth graders received copies of a booklet "Our Woodland World."

Movies on forest conservation and forest industries were also shown in schools, bringing conservation information to students of all grade levels.

The Commission's school programs are designed to add to each child's understanding of the total stewardship of life, building toward a stronger and more appreciative community of the future. The programs give basic information to children on the value of woodlands and the care needed to make them produce and contribute to a prosperous future.

Forestry Demonstrations

During the year 10,842 persons attended 240 demonstrations conducted by personnel of the Forestry Commission. These demonstrations covered forest fire protection, correct cutting methods, utilization of forest products, reforestation, control of undersirable species, and timber stand improvement.

In most cases demonstrations were held in cooperation with foresters of various companies, the Clemson University Extension Service, and other groups and organizations.

Arbor Day

Many people, agencies and organizations cooperated to make the observance of 1978 Arbor Day and Conservation Week a success. South Carolina Law designates the first Friday in December as Arbor Day. The State Commission of Forestry, Garden Clubs, Federated Women's Clubs, schools, churches, civic and patriotic organizations, newspapers, radio and television stations and others cooperate in placing the challenge of conservation before the people of South Carolina.

As in the past, a special folder was distributed to schools and other groups to assist them in planning programs and observances for Arbor Day and Conservation Week.

Forestry Commission personnel gave numerous talks at Arbor Day meetings. Many of the programs included tree planting exercises.

Motion Pictures

Motion pictures are valuable aids in teaching conservation and films are often used to supplement talks. Each district office has motion picture equipment which is used for forestry motion picture showings in every county in the state.

This year these films were shown a total of 647 times to over 25,773 people.

Films on forest fire control, forest management, reforestation and other forestry subjects are shown to school and church groups, civic clubs, community organizations and others.

The Forestry Commission maintains a film library making available many forestry and conservation films. These are loaned free of charge to any group, school, or civic organization.

Vocational Agriculture Forestry Program

In 1930 forestry was added as a course of study in vocational agricultural classes in South Carolina. Each year the Agricultural Education staff of the State Department of Education and the State Commission of Forestry work together to teach vocational agriculture students the importance and techniques of forest conservation.

School forest laboratories serve as aids in teaching forestry. They are outdoor classrooms where young men learn by doing. The students construct firebreaks to protect their laboratory from fire. They learn to plant trees, control weed trees, select, measure and estimate merchantable volumes in trees which are to be harvested. Timber in need of cutting is marked and cut by the students in many cases and is sold under contract as the students learn to market forest products. The laboratory is divided into a number of small plots to be worked one each year. One plot is left untreated to compare with plots where good forestry practices are carried out.

Many schools throughout the state have special forestry courses to train students in basic field forestry work. Six additional schools are conducting a course in timber harvesting.

The forestry advisory committee for each of these schools includes local school officials; state, industrial and private foresters; local sawmill owners, lumbermen, pulpwood dealers, and other interested local leaders. Training is given by local fire control personnel and foresters of the State Commission of Forestry as well as by the teachers in the forestry courses. In the timber harvesting courses the teacher with the help of pulp and paper industry personnel conduct the training.

The forestry and timber harvesting classes are training some students for jobs in forestry and forestry-related fields when they finish high school. Others are encouraged to go on to technical schools, ranger schools or universities for further forestry training.

Foresters employed by the Forestry Commission throughout the state conducted 51 programs for vocational agriculture teachers and students. These programs were attended by 1,185 persons.

Resource-Use Education

Resource-use and environmental education continue to stimulate interest in the out-of-doors as an aid to effective teaching, as well as a means of instilling conservation concepts.

The State Commission of Forestry, through its participation in the S. C. Advisory Council on Environmental Education, worked on the "Conservation Curriculum Improvement Project of the State Department of Education."

This project, financed through the Belle W. Baruch Foundation, prepared teaching guides for all school grade levels. The eight guides entitled "A view of the Environment" were especially adapted to:

Grades 1-3

Grades 4-6

Grades 7-9, Social Studies

Grades 10-12, Social Studies

Grades 7-9, Science

Biology

Home Economics

Outdoor Classrooms, Camping and Recreation

These guides were prepared by selected teachers with Dr. Paul B. Brandwein and Dr. Matthew J. Brennan of the Pinchot Institute for Conservation Studies serving as consultants. Representatives of resource agencies served as technical advisors.

Completed guides were used by some 2,000 teachers in schools throughout the state who made recommendations for changes and additions. These were incorporated into the teaching guides during the summer of 1967 by members of the original writing team.

The teaching guides were printed on a commercial basis. South Carolina received 30,000 as a basic supply. Additional copies are being sold by the J. G. Ferguson Publishing Company, with royalties to be paid to the Foundation on all sales.

The 30,000 copies retained in South Carolina were distributed to South Carolina's schools to furnish a copy to every teacher of these subjects in the state.

To help teachers become familiar with the content and use of the guides, week-long workshops were held during the summer of 1968 in five locations throughout the state. Approximately 150 teachers took part in these workshops. Forestry Commission personnel participated on one day of each workshop, explaining the education program and assistance that is available through the State Commission of Forestry.

In early 1970 a Curriculum Consultant for Conservation Education was employed by the State Department of Education. With this person working as Secretary to the Advisory Council and with schools and teachers, environmental education is now beginning to grow.

Forestry Commission personnel participated in five teachers' workshops in environmental education during the year. These were held at The Citadel, the University of South Carolina, Coker College and Clemson University (in cooperation with the Council), and Greenville School District. One hundred students took part.

The lesson plans for environmental investigation and the teachers' guides extend the opportunities for teachers to use the natural resources of the school grounds and adjoining properties as an extension of their classrooms for practical and enjoyable learning.

The S. C. Advisory Council on Environmental Education has been reorganized, has a new format and purpose. Its official name now is "The South Carolina Environmental Education Association, Inc." Forestry Commission personnel are serving in many capacities in the new Association.

Talks

State Commission of Forestry personnel give talks about forestry before many groups. The use of color slides with many of the talks helps make them more interesting and more effective.

During the year 372 talks were made by Commission personnel to 10,751 people. This does not include the talks made in connection with the 5th and 6th grade programs at schools throughout the state. Civic clubs, church groups, school groups, and other organizations were among those requesting talks.

Person-to-person talks with landowners and others continued to be one of the main ways Commission personnel pass along information on forestry to South Carolinians. Important points of contact between personnel of the Commission and the public are the 140 fire towers where persons visiting saw the work of detecting, reporting, dispatching, fighting and preventing fires explained or demonstrated.

Exhibits

Exhibits provide an excellent means of disseminating forestry information.

More than 1,118,150 people saw forestry exhibits and displays in fairs, parades, and special meetings as follows:

Exhibits, Floats and Displays for Special Events (Other than County or State Fairs)

<i>Location and Type of Float or Display</i>	<i>Est. Attendance</i>
Abbeville (Christmas Parade) Smokey Bear-Suppression Unit.....	5,000
Edgefield (Jaycee Christmas Parade) Smokey Bear-Suppression Unit	10,000
Trenton (Peach Festival Parade) Smokey Bear-Suppression Unit	5,000

McCormick (Gold Rush Parade) Smokey Bear-Suppression Unit	7,000
McCormick (Christmas Parade) Smokey Bear-Suppression Unit	6,000
Newberry (Fire Prevention Parade)	
Smokey Bear-Suppression Unit	4,000
Saluda (Christmas Parade) Smokey Bear-Suppression Unit	4,000
Sumter (Christmas Parade) Smokey on Ranger's Pickup	15,000
Camden (Christmas Parade) Smokey on Transport	10,000
Lancaster (Fire Prevention Parade) Smokey on Tractor and Ranger's Pickup	2,000
Cotton Festival Parade Smokey on Tractor	3,000
Darlington (Fire Prevention Parade)	1,000
Dillon (Christmas Parade)	7,500
Latta (Christmas Parade)	5,000
Florence (Fire Prevention Parade)	4,000
Florence (Christmas Parade)	6,000
Lake City (Fire Prevention Parade)	3,000
Johnsonville (Fire Prevention Parade)	3,000
Olanta (Christmas Parade)	5,000
Aynor (Christmas Parade)	1,000
Marion (Christmas Parade)	2,000
Brittons Neck (Christmas Parade)	350
Gaston (Christmas Parade) Smokey on Tractor Unit	4,200
New Ellenton (Christmas Parade) Smokey on Tractor Unit	6,000
Holly Hill (Christmas Parade) Smokey on Tractor Unit	3,000
Bamberg (Christmas Parade) Smokey on Tractor Unit	4,500
Orangeburg (Christmas Parade) Smokey on Ranger's Truck	12,000
Barnwell (Christmas Parade) Smokey on Tractor Unit	8,000
Bowman (Christmas Parade) Smokey on Tractor Unit	7,500
Williston (Christmas Parade) Smokey on Tractor Unit	3,500
Denmark (Christmas Parade) Smokey on Ranger's Truck	5,000
Graniteville (Christmas Parade) Smokey on Tractor Unit	4,200
Aiken (Christmas Parade) Smokey on Tractor Unit	11,000
Langley-Bath-Clearwater (Christmas Parade)	
Smokey on Tractor Unit	3,000
Congaree (Christmas Parade) Smokey on Pumper Unit	3,000
Pelion (Christmas Parade) Smokey on Pumper Unit	3,000
Bluffton (Christmas Parade) Smokey and Unit	1,200
North Charleston (Easter Parade) Smokey	10,000
Charleston (Fire Prevention Parade) Smokey and Unit	108,000
Ridgeland (Christmas Parade) Unit and Smokey	4,000
Hardeeville (Christmas Parade) Unit and Smokey	3,000
Hampton (Christmas Parade) Unit and Smokey	3,000
Allendale (Christmas Parade) Smokey on Tractor Unit	3,000
Lexington (Christmas Parade) Smokey on Tractor Unit	12,000
Boiling Springs (Christmas Parade)	
Smokey on Tractor Unit	6,000
Springfield (Christmas Parade) Smokey on Tractor Unit	1,500
Rowesville (Christmas Parade) Smokey on Tractor Unit	1,000
Blackville (Christmas Parade) Smokey on Tractor Unit	6,000
Branohville (Railroad Daze) Smokey on Tractor Unit	7,000
Gilbert (Peach Festival) Smokey on Pumper Unit	6,000
Wagener (Wagons to Wagener) Smokey on Tractor Unit	6,000
Bowman (Farm Festival) Smokey on Tractor Unit	4,000
Elloree (Elloree Trials) Smokey on Tractor Unit	5,000
Ehrhardt (Schuetzenfest) Smokey on Tractor Unit	10,000
New Ellenton (Atomic Festival) Smokey on Tractor Unit	6,000
Vauluse (Fun Festival) Smokey on Tractor Unit	4,000
St. Matthews (Purple Martin Festival)	
Smokey on Tractor Unit	6,000
St. George (Christmas Parade) Ranger Truck and Smokey	3,000
Summerville (Fire Prevention Parade) Unit	5,000
Summerville (Flowerdown Festival Parade) Smokey	6,000
Moncks Corner (Christmas Parade)	
Smokey Bear and Fire Control Unit	20,000
Kingstree (Homecoming Parade)	
Smokey Bear and Fire Control Unit	2,000
Total Estimated Attendance — Exhibits, Floats and Displays for Special Events	435,450

Exhibits at State and County Fairs

<i>County Fair</i>	<i>Type of Exhibit</i>	<i>Est. Attendance</i>
Abbeville	Judge Smokey	8,500
Chester	Fire Prevention Diarama	16,000
Greenwood	Commercial Woods of S. C. —	
	Gum Cross-section	60,000
Laurens	Commercial Woods of S. C.	20,000
McCormick	Flowers of the Forest	6,000
Newberry	Mr. Tree Farmer	15,000
Camden	Mr. Tree Farmer	4,200
Lancaster	Mr. Tree Farmer	3,000
Sumter	Judge Smokey	41,000
Florence	Fair Exhibit	75,000
Berkeley	Judge Smokey	25,000
(Moncks Corner)		
Pickens	Upper State District —	
	Judge Smokey	85,000
Hampton County Fair	Mr. Tree Farmer	3,000
Total Estimated Attendance County Fair Exhibits		361,700
State Fair		
Columbia	Forest Panorama	321,000
Total Estimated Attendance Fair Exhibits		682,700
TOTAL — Exhibits, Floats, Displays for Special Events		435,450
GRAND TOTAL		1,118,150

Radio and Television

Radio and television stations in South Carolina cooperate generously with the Forestry Commission by providing air time for many programs and announcements on forest fire prevention, forest management and other phases of forestry.

Several districts have regularly scheduled programs on various radio stations.

A number of television programs were presented on forest fire prevention and other forestry information. Records show that at least 351 live or taped radio and TV programs on forestry were presented during the year. This number does not include the hundreds of recorded programs and film spots carried by radio and television stations, using material made available through the National and Southern Cooperative Forest Fire Prevention Campaigns, and spot announcement material prepared by the Forestry Commission for special use during periods of high fire danger.

News Releases and Articles

Newspapers provided excellent coverage, placing forestry news and information before the people regularly.

During the year Commission personnel prepared 516 news articles. This is not a complete picture of the news coverage that the Commission received during the year. Many times, such as during serious fire situations, news items are telephoned to individual papers and to the wire services. Many stories are written by newspaper editors and reporters.

In addition to news releases, a number of feature articles on forestry were prepared. Photographs or mats illustrating the story were often included with the feature. Commission personnel in every county of the state prepare news articles. In this way, news is localized.

Publications

The State Commission of Forestry utilizes a wide variety of publications to carry out its information and education program. One important function of printed materials is to provide detailed information to those who request forestry information.

Beginning with a Spring (January-February-March), 1979 issue, the Commission publishes an intra-agency quarterly which is designed to keep all Commission employees and County Forestry Board Members abreast of personnel and general Commission activities.

Over the years the Commission has reprinted a number of booklets, folders, leaflets, and other materials.

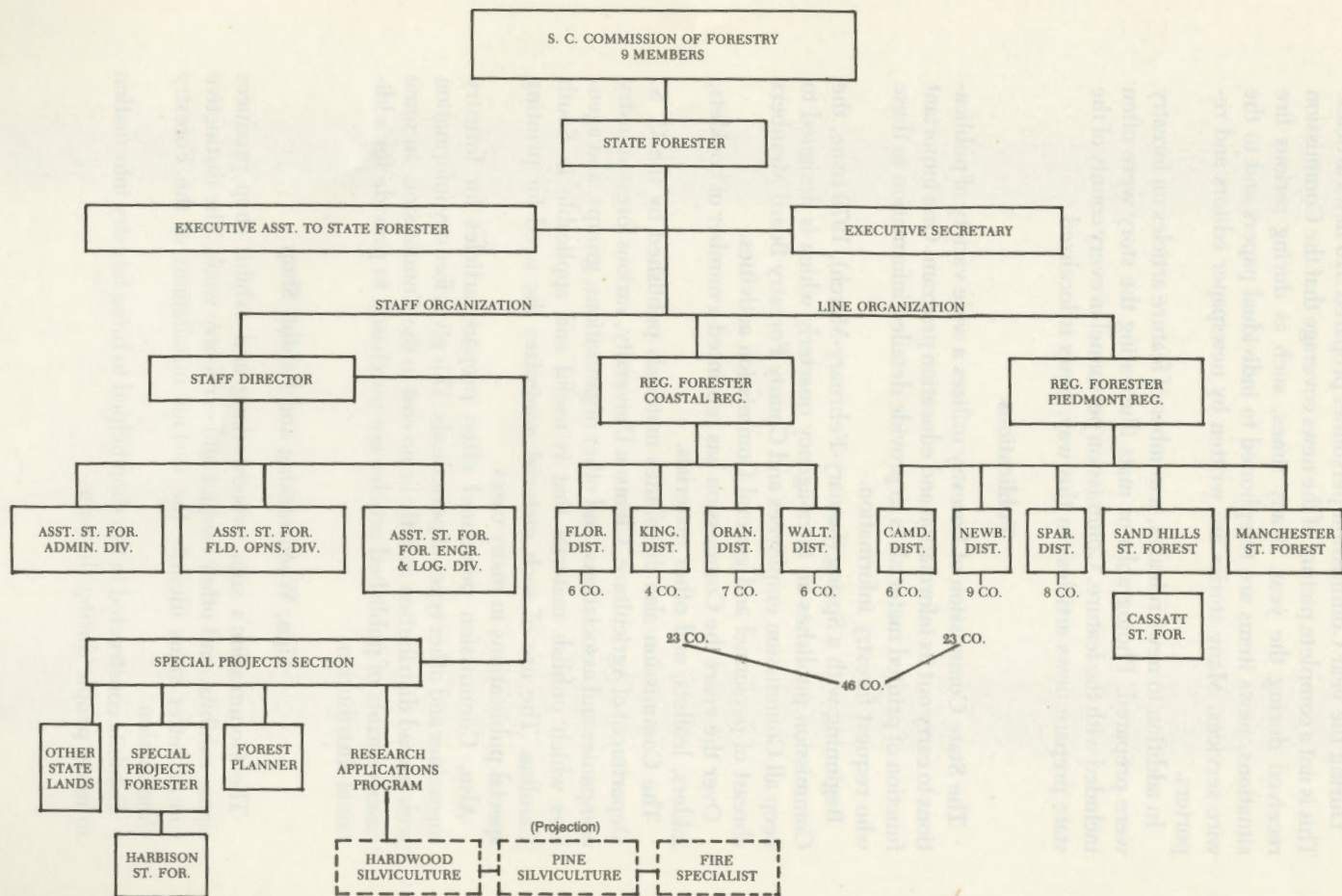
The Commission also distributes materials published by the U. S. Department of Agriculture, Clemson University, various forest industry companies and associations, and other organizations, groups, and agencies which publish material that is useful and applicable in South Carolina. The use of such material minimizes the need for printing special publications in many cases.

Also, Commission personnel often prepare articles for forestry magazines and other types of periodicals. This gives forestry information widespread distribution at little or no cost to the Commission. In some cases reprints of published articles are purchased to provide for additional distribution.

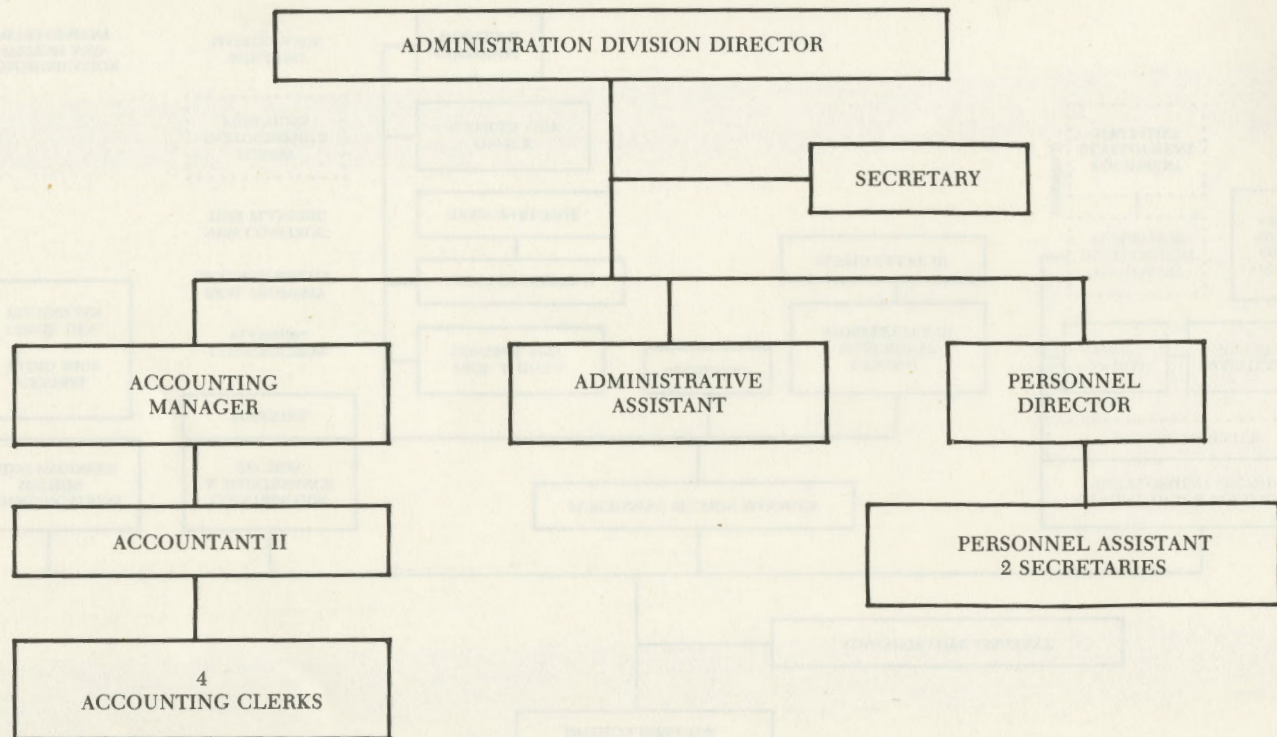
Sign, Woodworking and Exhibit Shop

The Commission's sign, woodworking and exhibit shop produces signs, exhibits, and other cabinet and carpentry work. The distinctive routed letter signs identify the various installations of the Forestry Commission.

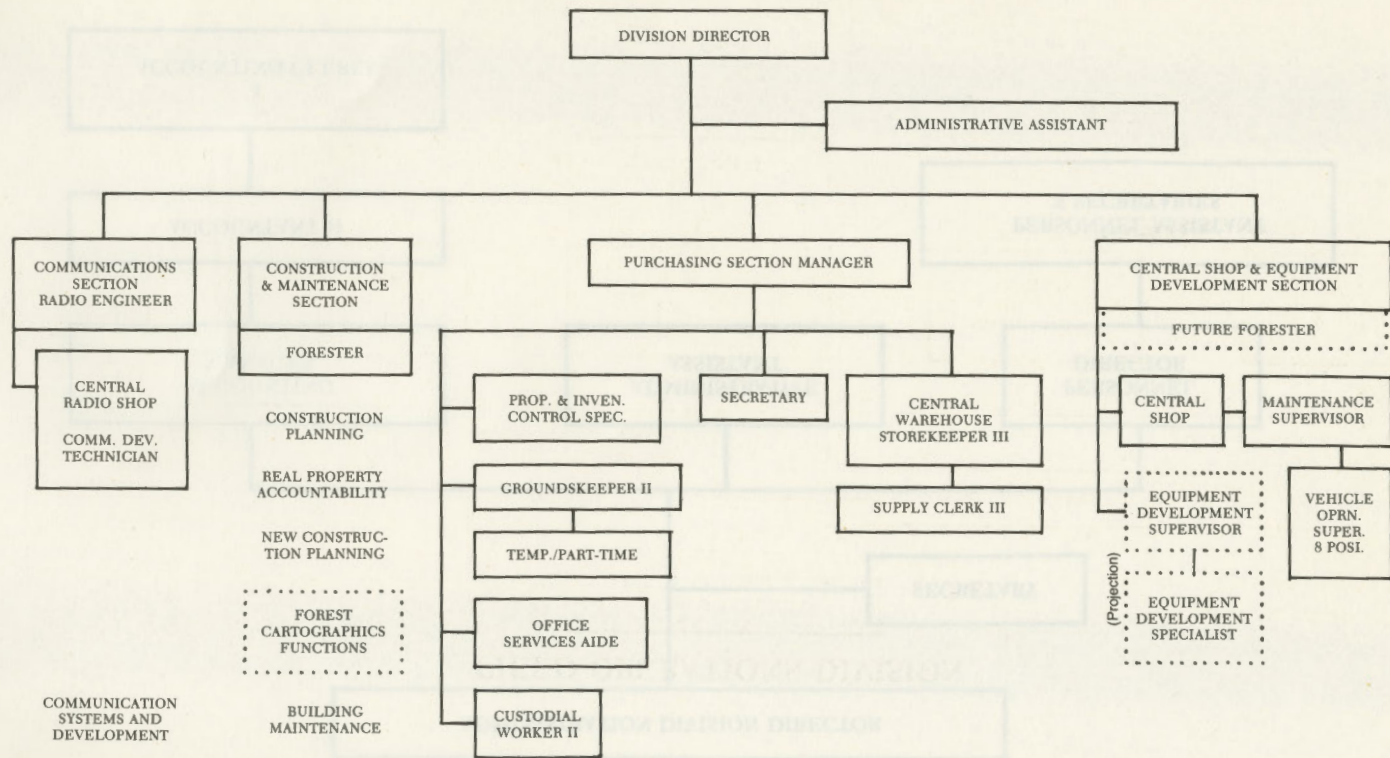
Exhibits constructed in the shop helped to bring forestry information to many people during the year.



ADMINISTRATION DIVISION

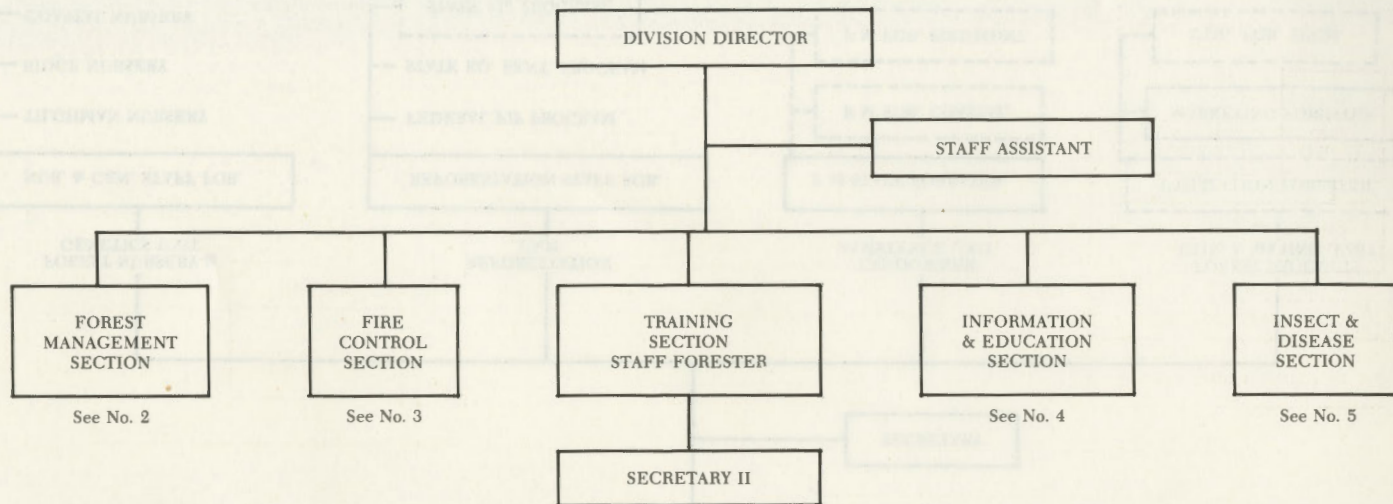


FOREST ENGINEERING AND LOGISTICS DIVISION

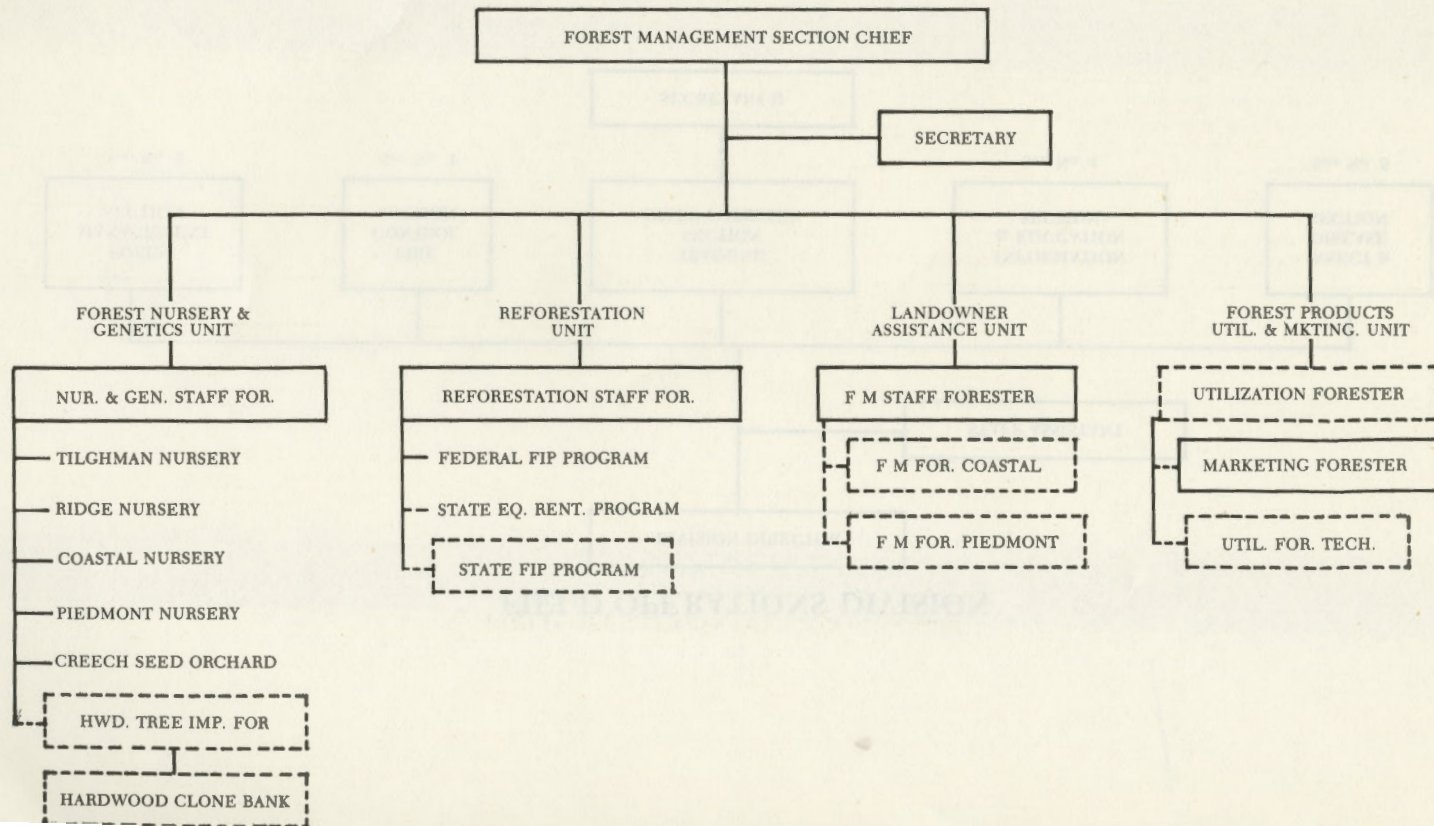


This Division will perform services for all programs.

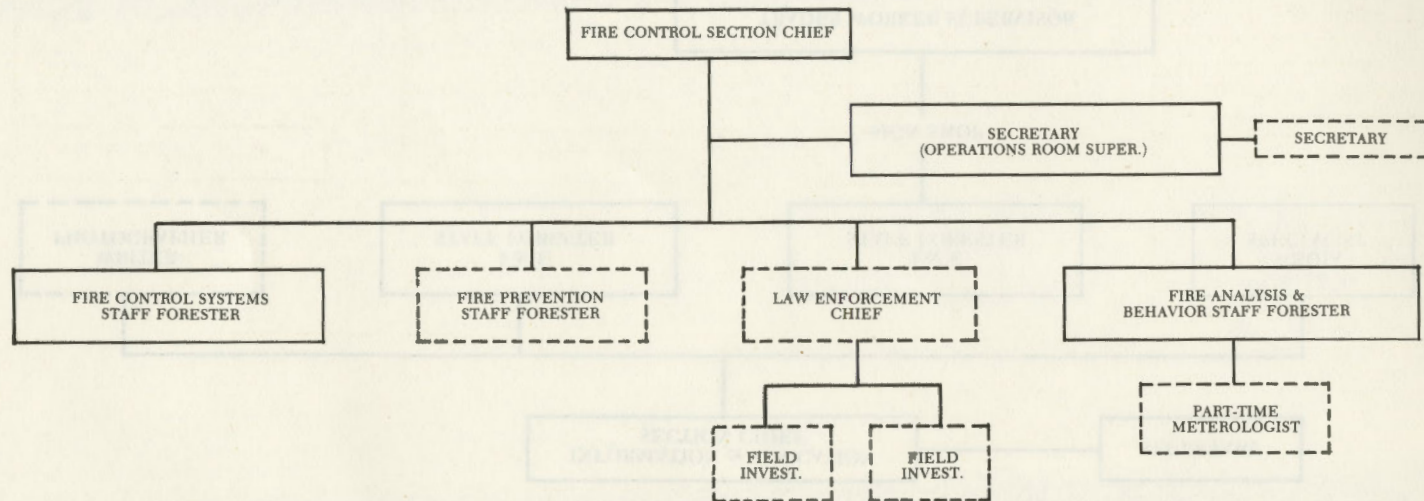
FIELD OPERATIONS DIVISION



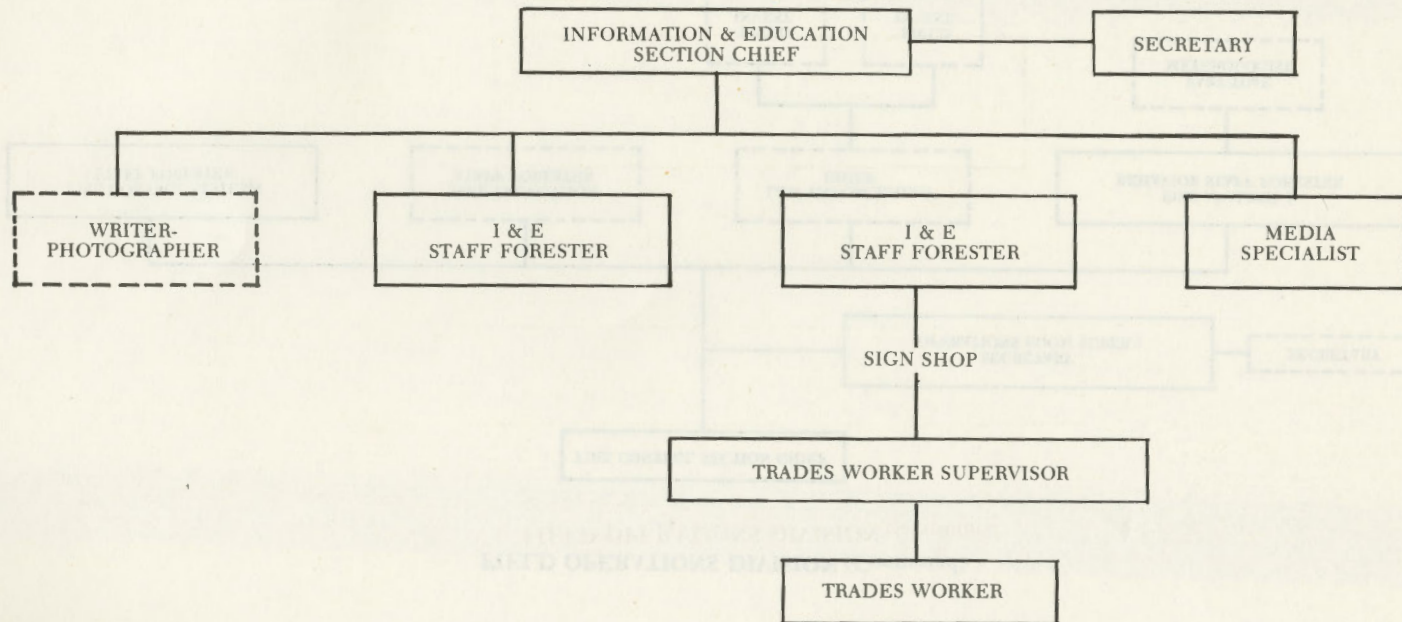
FIELD OPERATIONS DIVISION (Continued)



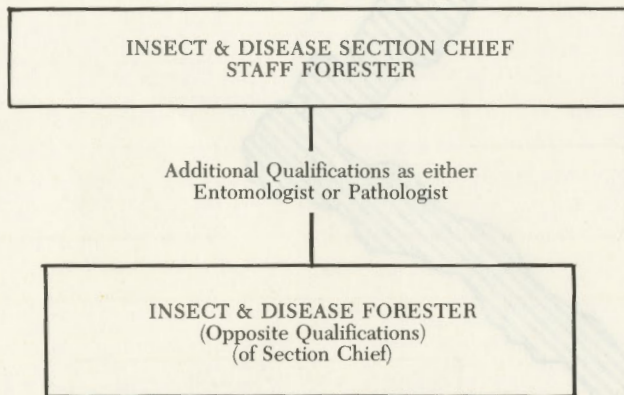
FIELD OPERATIONS DIVISION (Continued)

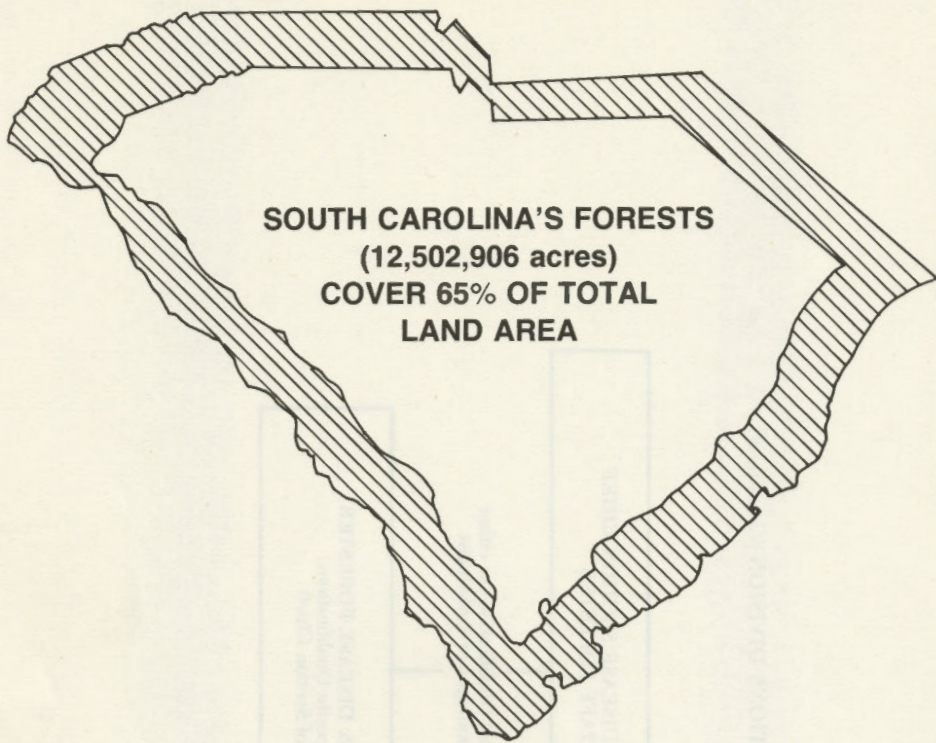


FIELD OPERATIONS DIVISION (Continued)



FIELD OPERATIONS DIVISION *(Continued)*





SOUTH CAROLINA'S FORESTS
(12,502,906 acres)
COVER 65% OF TOTAL
LAND AREA

WATERSHED		BEAVERDAM		JACKSON MILL		LITTLE LYNCHES		OOLENOY		RABON CREEK		BEAVERDAM-WARRIOR		BROWNS CREEK		CANE CREEK		CLARKS FORK-BC		EIGHTEEN MILE		FAIRFOREST		ROCKY CREEK		SOUTH TYGER		THREE & TWENTY		UPPER NEW RIVER		TOTALS	
		1978-79	To Date	1978-79	To Date	1978-79	To Date	1978-79	To Date	1978-79	To Date	1978-79	To Date	1978-79	To Date	1978-79	To Date	1978-79	To Date	1978-79	To Date	1978-79	To Date	1978-79	To Date	1978-79	To Date	1978-79	To Date	1978-79	To Date	1978-79	To Date
1. Tree Planting — Open Land	Acres	10	87	151	413	212	4,630	0	0	0	12	0	175	67	966	38	489	214	1,217	0	0	356	774	275	4,079	87	628	41	661	43	43	1,494	14,174
No. Trees Planted	No.	7,000	64,500	105,700	302,550	146,280	3,454,303	0	0	0	9,000	0	128,500	45,560	657,360	26,220	388,822	149,800	907,200	0	0	247,000	517,900	192,500	2,800,300	59,160	452,510	29,000	552,000	32,250	32,250	1,040,470	10,267,195
2. Hydrologic Stand Improvement	Acres	0	4,082	300	16,107	1,117	33,557	425	2,002	725	2,546	164	8,528	562	5,237	731	21,032	2,680	11,551	415	9,552	2,235	5,777	400	26,321	606	5,741	2,723	37,154	1,332	2,890	14,415	192,077
Release of Desirable Species	Acres	0	0	0	328	0	957	0	0	0	0	0	22	0	0	0	60	0	0	0	0	0	0	313	0	20	0	26	0	0	0	1,726	
Precommercial Thinning	Acres	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	2	0	0	0	0	0	0	5	0	0	0	14	
Commercial Thinning	Acres	0	184	175	4,413	0	8,360	0	34	15	70	36	904	47	339	0	3,394	300	880	41	554	120	436	400	4,141	47	1,664	460	4,060	148	348	1,798	29,781
Interplanting	Acres	0	0	0	0	0	145	0	0	0	0	0	10	0	0	0	13	0	0	0	0	0	0	0	0	0	31	0	16	0	0	215	
No. of Trees	No.	0	0	0	0	0	42,100	0	0	0	0	0	3,000	0	0	0	8,000	0	0	0	0	0	0	0	0	0	22,500	0	6,500	0	0	0	82,100
Underplanting	Acres	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	114	235	114	240
No. of Trees	No.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4,000	85,000	176,250	85,500	180,250
Management Assistance Given	Acres	222	3,527	1,158	15,561	1,117	19,512	423	1,932	700	2,466	128	6,780	486	3,606	730	14,958	2,200	9,950	333	8,356	1,971	6,153	1,367	22,779	508	3,757	1,785	28,877	879	1,741	14,007	149,955
Fencing	Rods	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	64	0	0	0	0	0	0	0	0	0	0	0	35	0	0	0	99
Area Protected From Grazing	Acres	0	0	0	45	0	0	0	0	0	0	0	350	0	0	0	24	0	0	0	0	0	0	0	0	0	12	0	4	0	0	0	435
Timber Marked (M)	Acres	0	593	175	1,528	0	3,802	2	36	10	10	0	462	47	328	1	2,232	180	721	41	640	144	236	0	3,087	51	257	469	4,161	20	60	1,140	18,153
Other	Acres	0	0	0	0	0	781	0	0	0	0	0	0	0	1,026	0	344	0	0	0	0	0	0	0	0	0	0	0	0	128	463	128	2,614
3. Critical Area Stabilization	Acres	11	276	0	56	0	11	0	0	37	228	34	228	0	68	0	5	0	0	3	118	0	4	0	32	0	69	0	501	0	0	85	1,596
Tree Planting	Acres	11	241	0	55	0	6	0	0	37	228	17	181	0	68	0	5	0	0	3	113	0	4	0	29	0	49	0	435	0	0	68	1,414
No. of Trees Planted	No.	7,500	181,500	0	34,800	0	4,550	0	0	25,400	166,350	11,900	138,300	0	45,660	0	3,455	0	0	2,000	87,000	0	4,000	0	25,000	0	42,500	0	284,500	0	0	46,800	1,017,615
Site Preparation	Acres	0	35	0	41	0	6	0	0	12	52	17	17	0	18	0	5	0	0	0	38	0	0	0	22	0	16	0	239	0	0	29	489
Fertilization	Acres	0	0	0	20	0	6	0	0	0	10	0	15	0	0	0	5	0	0	0	14	0	0	0	10	0	8	0	200	0	0	0	288
Mulching	Acres	0	0	0	16	0	6	0	0	0	0	0	0	0	0	0	2	0	0	0	11	0	0	0	10	0	4	0	14	0	0	0	63
Grass	Acres	0	35	0	20	0	6	0	0	0	3	0	15	0	0	0	5	0	0	0	15	0	0	0	10	0	8	0	11	0	0	0	128
Check Dams	No.	0	0	0	333	0	0	0	0	0	0	0	196	0	178	0	3	0	0	0	507	0	0	0	336	0	1,083	0	4,735	0	0	0	7,371
Fencing	Rods	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	371	0	0	0	371
4. Requests for Assistance:																																	
SCD Conservation Farm Plans	No.	3	64	0	19	0	16	1	14	13	33	2	59	1	1	0	30	0	0	4	45	3	7	0	39	10	35	3	129	0	0	40	491
Management Advice or Recommendation	No.	8	66	11	100	21	267	5	48	13	33	2	49	7	35	14	173	19	103	12	93	22	69	9	145	10	47	11	227	6	16	170	1,471
Other Requests (Marking, Forest Pests, etc.)	No.	0	44	7	67	0	60	1	10	1	8	0	28	2	23	1	169	4	38	3	47	9	21	4	24	8	66	2	86	3	9	45	700
5. Requests Serviced:																																	
Woodland Management Plans	No.	3	54	0	19	0	16	1	9	13	33	2	55	1	1	0	29	0	0	4	28	3	105	0	39	10	35	3	127	0	0	40	550
Area Involved	Acres	222	2,376	0	1,402	0	428	344	965	700	1,973	128	5,415	98	98	0	4,685	0	0	136	2,348	60	164	0	4,438	425	1,954	161	8,906	0	0	2,274	35,152
Mgt. Advice or Recommendation	No.	3	65	11	100	21	258	5	48	13	41	2	61	7	35	14	163	19	103	12	90	22	69	9	145	10	47	11	186	6	16	165	1,427
Area Involved	Acres	222	2,817	1,158	10,205	1,117	13,440	423	2,235	700	2,466	128	3,762	386	2,926	730	13,676	1,354	6,443	333	8,334	324	3,502	1,367	17,516	425	2,161	615	11,497	286	1,100	9,568	102,080
Other Management Requests	Acres	0	36	7	64	0	48	1	6	1	2	0	29	2	7	1	128	4	38	1	48	9	16	0	13	0	22	2	86	3	8	31	551
Area Involved	Acres	0	975	175	1,854	0	740	2	41	10	25	0	447	7	52	1	546	52	274	41	828	79	127	0	103	0	519	33	1,458	5	14	405	8,003
Promotional Activities:																																	
Meetings	No.	2	23	0	14	1	2	0	3	0	2	0	3	1	2	2	11	0	0	0	5	1	1	1	0	9	2	15	0	3	2	7	11
Show-me Trips	No.	1	3	0	0	0	0	0	0	0	8	0	3	0	0	0	0	0	1	0	2	0	0	0	0	2	5	0	1	0	0	3	23
Group Demonstration	No.	1	4	0	4	0	0	0	0	5	5	0	0	0	0	0	0	0	1	0	0	0	0	0	0	2	12	0	3	0	1	8	30
Individual Contacts	No.	2	103	24	190	15	139	6	63	0	16	0	79	9	50	0	70	10	10	14	223	29	34	26	291	12	128	61	827	5	23	213	2,246
Newspaper Articles	No.	0	5	0	8	0	0	0	0	0	1	0	7	0	5	0	0	0	0	0	1	0	0	0	6	0	1	0	8	1	3	1	45
T. V. Programs	No.	0	0	0	9	0	2	0	0	0	0	0	0	0	0	0	3	0	2	0	0	0	0	0	0	0	5	0	4	4	8	4	33